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# **MAY 2015**

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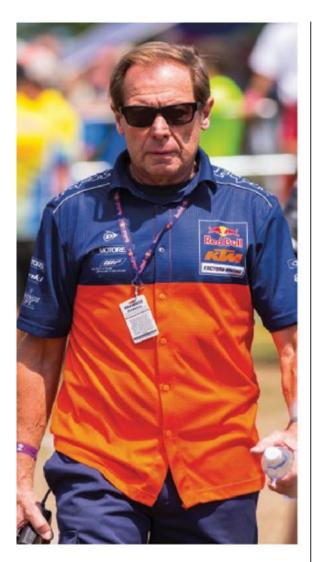
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## ON THE COVER

When it comes to illustrating the speeds that the top racers are capable of reaching, Team Honda HRC's Cole Seely is a perfect candidate. Here, Seely scores his first Dirt Rider cover ever in front of Adam Campbell's camera... and nearly a dozen LAPD officers!





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### Story By Chris Denison , Photo By Shan Moore

# GUSTO

# TACTICAL UPSHIFTING

Change is a natural, necessary, and central factor of our universe, and yet it's also something that most people tend to resist. We see this all the time in the motorcycle magazine business; digital content is growing, print is evolving, and mobile usage is fast becoming the modern world's favorite pastime, all of which contributes to a rapidly changing landscape. Not since the advent of the printing press has media distribution undergone such a wild transformation as the one we're experiencing right now. Some people find this shift to be incredibly frightening. Personally, I think it's an exciting time to be in publishing, but it has certainly been a creative challenge to align the various elements of our brand with our primary goal of being the best in the business.

In order to best serve you, our loyal reader, we've got a couple of changes in store for 2015. First and foremost is a reduction in frequency to 10 issues per year instead of 12. Now, before you go all "Chicken Little" on me, let me explain: The monthly magazine model is a throwback to the days when the Internet did not exist and when moto fans would wait by their mailboxes for news of who won a major race or which manufacturers were releasing new models. Times have simply changed. Now, races are often broadcast live (so you don't have to wait to find out who won), there is an overwhelming amount of content available online (that can be accessed via that little screen you keep in your front pocket), and print magazines have come to feature

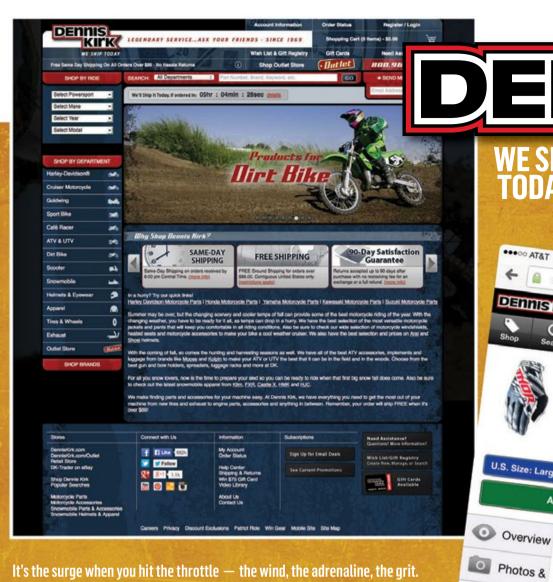
more "timeless" content—things like in-depth tests, comparisons, and features that are still worth reading more than 48 hours after a race. Because of all this, going to a 10x model allows us to continue to create great magazines while affording us more bandwidth to focus on digital, both in terms of time-sensitive stories as well as long-form videos and features. And rather than simply getting rid of two months worth of *Dirt Rider*, we're merging two sets of issues into what we're calling "double issues"—larger-than-usual combined issues that will feature some fun and unique content. And, yes, we're planning on bringing back the ever-popular Guest Editor edition of *Dirt Rider* this year. We've already lined someone up for the next iteration, and while I don't want to spill the beans just yet, I can say that we've definitely found a worthy successor to Doug Henry!

Another change that has occurred is a shuffle in our staff; after three years at *DR*, Senior Editor Adam Booth has moved across the pits and is now *Motorcycle-USA*'s Off-Road Editor. On the sales side, we've gained a new teammate in Chris Siebenhaar, a talented sales rep with an awesome first name who loves to ride moto and off-road every bit as much as the rest of us. We're also bringing on more fire-power by way of two new video editors, who will be helping us with the next big change: the rebirth of the *Dirt Rider Adventures* video series, which was formerly aired on the *Outdoor Life Network* nearly 10 years ago. This is something that we're all pretty pumped about;

thanks to the rapidly blurring line between the Internet and television, we're able to deliver video content that was previously only available to those who had certain satellite TV channels to every reader with an Wi-Fi connection. A throwback to the original series but with more of an emphasis on testing, the rebooted *Dirt Rider Adventures* series will live up to its name by featuring the coolest, most unique off-road-related stories available online. We're also in the early stages of revamping our website in order to make all of this content even easier to find and view.

What this all comes down to is that you trust us to provide you with the best content possible, and we take that trust extremely seriously. I realize that change can be a scary thing, but I'm confident that these decisions will allow us to grab an even higher gear and take our mission of motorcycle content delivery to the next level. Everyone at Dirt Rider, all the way up to the head honchos at Bonnier, loves magazines and dirt bikes just as much as you do, and we're committed to bringing you the best experience possible...just so long as you promise to put down your smart phone and go riding every once in a while!





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# COMA CONQUERS DAKAR







he 2015 Dakar Rally came to an exciting conclusion in Buenos Aires after nearly 6,000 miles through three countries over two weeks. Red Bull KTM's Marc Coma controlled that final week with the experience born of four previous Dakar victories; even though he didn't win a single stage in the final week, he didn't have to, as his pursuers all fell victim to one issue or another. He accumulated a total time of 46 hours, three minutes, and 49 seconds.

As expected, Team HRC provided the strongest challenge to the might of the KTM juggernaut. The squad of factory CRF450R Rally racers proved extremely competitive and were all up to the task while demonstrating selfless teamwork.

The Red Riders ended up with seven stage victories out of the 13 stages, with Paulo Goncalves earning runner-up honors 16:53 back

from Coma. Australia's Toby Price rounded out the podium in his Dakar debut, the factorysupported KTM rider turning heads with his historic stage 12 win to become a member of that elite group of individuals who've won a stage in their first-ever Dakar appearance. You also can't ignore Team HRC's Laia Sanz; her fifth-place finish in stage eight and her ninth overall result were both the best by any woman in history.

The only Americans of note to finish were Robby Gordon and Johnny Campbell in the car category, posting 19th overall after several time-consuming problems during the race. But they did end on a high note by winning the final stage. One American who hopes to get a crack at Dakar in the near future is Colton Udall. The WFOx Motorsports Honda rider recently signed up to race in the Tatts Finke Desert Race in June, one of Australia's classic off-road races.

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# TEAR OFFS

# QUICKIES

- Thad Duvall will be riding a Husqvarna for KR4 Racing in 2015. Duvall will be riding the XC1 class in the GNCC series and will be riding select rounds of the Kenda AMA National Enduro Series.
- Add the Cortez Challenge to the short list of rally raid-format races in North America, specifically in Baja. Set to run just before the NORRA Mexican 1000, it'll start with a rally school, registration, and tech on April 21 in Mexicali. The next three days will see the rally run, ending in Ensenada on April 24.
- Eight-time national trials champ Pat Smage has signed on to be an ambassador for Fatbike bicycles and is using them for cross-training.
- The Black Jack Enduro Championship Series, formed in 1975 as a regional Enduro series in Arkansas, Kansas,
   Missouri, and Oklahoma, is celebrating its 40th anniversary as one of the country's premier off-road motorcycle racing series, and in 2015, all BJEC events will use the Start Control/Restart race format.
- Yamaha Power Equipment is giving away one of its top-of-the-line pressure washers to the rider who earns the most series points in one class after the first five rounds of the 2015 Kenda AMA National Enduro Series presented by Moose Racing.
   In the event of a tie, those riders' names will be placed in a hat and the winner will be drawn. Go to nationalenduro.com for more info.
- Ricky Carmichael was included in the
   27th class of inductees at the Motorsports
   Hall of Fame of America at Daytona
   International Speedway, which also included a list of legends representing a variety of racing disciplines. The group will be inducted Thursday, June 18 at Detroit's historic Fillmore Theater.
- Jonny Walker won the inaugural

  Alès Trêm extreme enduro in France after

  delivering an impressive performance to

  win both the EnduroCross prologue and

  main event in style.

### TAILGATE

WHERE BENCHRACERS GO TO BANG BARS

# NOTES, QUOTES, AND WORDS OF WISDOM FROM INSIDE THE INDUSTRY...



"I told my guys I didn't know how I'd feel, but when that gate dropped it didn't bother me, so I guess I made the right decision to go to Europe."

—Ryan Villopoto on how he felt when the gate dropped for Anaheim 1 and he wasn't on the line

1003. Juliu 1400



"With the situation with James, because we didn't have any information at all on it, all we could do was go forward believing he was going to get to race. We went through the same testing and parts ordering and building the infrastructure, but about 10 days before the opener we got the word he wasn't racing. It was a total bummer."

—Yoshimura Suzuki team manager Mike Webb on managing the off-season while not knowing if James Stewart would be racing



"We had a lot of input on this bike from the very beginning. We've managed to make the bike substantially lighter, and we are very close to the weight limit, which is very hard to do since we are also running the electric start. We also worked on the turning ability and making the bike more stable."

—Roger DeCoster on the development of the 2015 KTM SX-F Factory Editions



"I just told him... He was the biggest crybaby in the sport."
—Trey Canard on what he told Chad Reed after retaliation from Reed at

Anaheim 2

"The main thing we concentrated on with the bike was to fit the controls and cockpit for a short guy like me. We got everything kind of bunched up and keeping it low, so I feel comfortable on it. Basically, the bars are back, the seat is cut, and the pegs are raised up—typical things you do for a short guy."

—Blake Baggett, who switched to the 450 class this year, on how he got his Yoshimura Suzuki RM-Z450 to fit him



"After track walk, I told my mechanic I was going to win today, and I figured I better back it up or I'd look like an idiot."

—TLD/Lucas Oil/KTM's Jessy Nelson on getting his first supercross win at Anaheim 1

DIGITAL DIRT: Kudos to Discount Tire for its latest commercial featuring riders Chad Reed and Josh Grant. dirtrider.com/reed-grant



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# TEAR OFFS

# STATE OF THE SEASON BY THE NHHA

The National Hare and Hound Association (NHHA) took the helm of the AMA Hare & Hound National Championship Series a few years ago and added the AMA West Hare Scrambles Championship Series to its responsibilities last year.

Two rounds of both series are in the books now. Given that early rounds of most series tend to enjoy lots of participation, how does the NHHA project the status of both?

According to the NHHA's Ryan Sanders, the first hare scrambles were successful on several counts: "The Adelanto Grand Prix got scheduled [on our original date] 45 days before the event. So our first round backed out—they didn't want to go up against it." But promoter (and racer) Shawn Strong contacted city officials in Page, Arizona, and they readily agreed to let him put on a replacement race which, of course, was a home run. "Between Erek [Kudla of the NHHA] and myself and Shawn at the first round, everything was handled perfectly. I'm excited to have the three of us young guys get a good race in the books. It was like a good test to show we could do it—and that first round didn't pay any other points! It was just hare scrambles."

He continued, "I think it also worked well for the Northern California crowd to introduce them to the NHHA. I think it showed that we're just working alongside the clubs; they know their race format's the same. We're just helping with promotions and getting some sponsorship and media coverage. It shouldn't be like a grand prix and glorified motocross—it should be true off-road racing." Going forward, Sanders says physically centralizing things on race day is on the agenda, as well as keeping sponsors satisfied and attracting new ones.

# SHERCO SIX DAYS LIMITED EDITION BIKES

HERE IS A LOOK AT THE 250/300/450 SEF-R.



In order to commemorate the fantastic success of the Sherco riders in last year's ISDE in Argentina, the manufacturer has decided to release these Six Days Limited Edition models. The bikes will have a translucent fuel tank and unique graphics that represent this iconic race. All displacement models of the Enduro range will be available in this configuration for a limited time. The bike is available in 2T (250/300cc) and 4T (250/300/450cc). Visit shercooffroad.com for additional information.

JAMES STEWART
REPLICA MOUNTAIN BIKE

Roy's Cyclery is a new sponsor for James Stewart and Yoshimura Suzuki for 2015, and one thing Roy's wanted to do was build a display bike that gave a nod to James and his RM-Z450. Roy's basically took an aluminum-framed Intense Tracer T275 mountain bike and "themed" it based on James' bike by powdercoating it Suzuki yellow and adding a Fox shock, with a titanium spring, among other details. Of course, Roy's will build you one if you call the cyclery, but expect it to be in a supercross-star price range.





● DIGITAL DIRT: Meet the entire Team TLD crew and hear all about the transition during the off-season. dirtrider.com//tld-2015



# **MX ON DEMAND!**

Are you tired of the same old moto videos that just show riders hitting kickers? Are you looking for a more in-depth look at today's motocross



stars? Well, you are in luck.

From the mind of Kyle Cowling comes a new series that takes you behind the scenes and inside the life of today's motocross superstars. Episode one (of six) is now available on Vimeo On Demand and takes you to BTOSPORTS.com/KTM's Andrew Short's farm in Smithville, Texas. There is plenty of Andrew riding in this film, but Cowling gives you a behind-the-scenes look at what makes Shorty's home team so special.

We have seen a prescreening of this episode, and it is nothing short of amazing. If you are not an Andrew Short fan, you will be after watching episode one of This Is Home with Andrew Short. You can buy it at vimeo.com/ondemand/spectrumseries for \$1.99, or you can buy all six episodes (different episode once a month) for \$9.99.

# **QUICK TIP: SEE MY THUMB?**



So that Shane McElrath's thumb doesn't get "rubbed the wrong way" during a race, his mechanic, Andy Dalton, cuts the waffle pattern off the throttle grip on his TLD KTM in the thumb contact area, leaving the remaining pattern so that Shane still has good grip.

# **BLYTHE WINS WEST HARE SCRAMBLES** CHAMPIONSHIP OPENER

Ian Blythe won his first National-level AMA off-road race, the opening round of the Kenda/SRT AMA West Hare Scrambles Championship Series in Page, Arizona.

Blythe got off to a quick start but couldn't shake Destry Abbott and Cory Graffunder, the three of them immediately separating themselves from the rest of the very large pack. They spent the next hour or so trading the lead, none able to pull away from the other two as they hammered at each other on the brutally physical 15-mile course comprised mostly of deep, heavy sand whoops.

Attrition finally thinned the group with veteran Abbott the first to drop after losing his rear brake and crashing hard twice. Graffunder managed to hold pace longer but still couldn't keep up with Blythe, who proved to be both speedy and in shape as he dominated the last half. Nick Burson came from near the back of the pack and snapped up third after Abbott retired, Chris Bach



following him for fourth with Axel Pearson rounding out the top five. In the new FMF 250cc Pro division, Joey Fiasconaro got the \$100 bonus from FMF, edging out Nick Stover and early leader Josh Knight.

Over the years, butt patches have become a creative way to exhibit self-expression among motocross racers. And while butt patches aren't as prevalent as they were a while ago, there are still a few riders out there with something to say. Here are some good examples from this year's Monster Energy AMA Supercross Series. See if you can match the butt patch with the rider.







Answers: 1) Justin Barcia; 2) Ken Roczen; 3) Chad Reed 4) Eli Tomac; 5) Ryan Dungey

DIGITAL DIRT: Life isn't only about competing. dirtrider.com/life-at-millsaps

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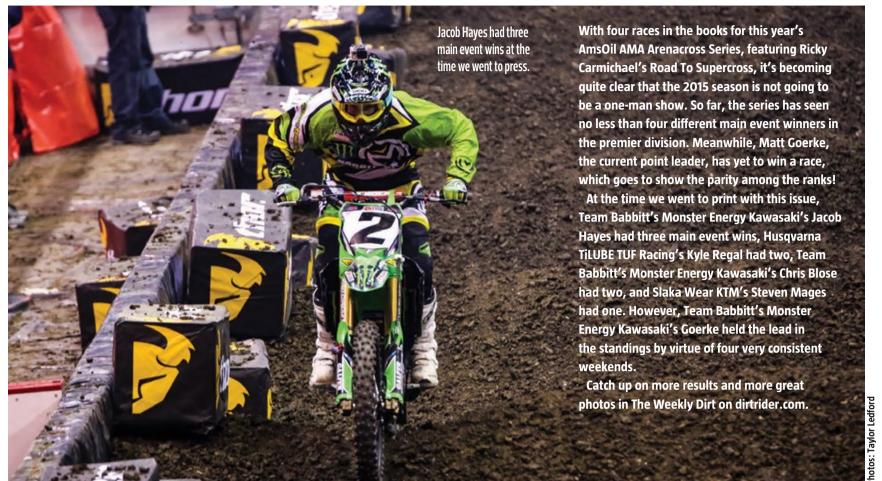
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# EARO

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# **COOL PRODUCT OF THE MONTH**

If you've followed Dirt Rider for any length of time, then you know we like to test boots. Here is Fly Racing's entry into the premium off-road boot segment, called the Sector. Key premium features include the Sector's Torsion Control Protection System, easy-to-use positive latch buckles, and slip-on inner bootie system. Stay tuned for an in-depth look at the Sector in the near future.

Tight Digital Digital Digital Digital Pyou missed the action between Trey Canard and Chad Reed at Anaheim 2, check it out here. dirtrider.com//black-flag-reed



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# 2. Klim Fuel Pak: \$49.99 Even though this hydro pack has the word "fuel" in its name, we wouldn't suggest putting a protein shake in. klim.com (208) 552-7433 3. Enduro Engineering Pinch Me Not! Flexx Debris Deflectors, Silver: Dirt bike riders will do almost anything Foam Tire Insert: \$39.95 \$69.95 to avoid flats. Here is a new product that Most tubes are softies. You The only way hand guards can work is part bib mousse, part oversize rim tape give them a pinch and they with your Flexxbar is if they flex with that is designed to eliminate pinch flats. just collapse. These inserts it. Just don't take them to the gym; Creator James Curry explains: "Tube make it nearly impossible for they'll show off. Saddle is for everyone: from off-road, that to happen. enduroeng.com to motocross, to dual-sport, to GNCC, to tubesaddle.com anything. Tube Saddle is inexpensive, it (517) 393-2421 is lightweight, it is pressure adjustable, and it is serviceable on the trail. The 4. Next Corr main advantage of using Tube Saddle Rev Chain Guide: \$89.95 is that you can run lower tire pressures In life and on a dirt bike, you without the worry of getting pinch flats. never know what is coming next, but On a track, you have the lightweight apparently these new components advantage compared to heavy-duty are it. tubes or mousse bibs and at a fraction of matrixracingproducts.com the price. The difference between 12 and 14 psi compared to 8 and 10 psi is huge! (661) 253-1592 Many claim it is like having their suspension revalved." MX Goggle Riding Crows Top White, Blue Outriggers: \$75.90 Ciao. Diciamo pin per vincere! If these goggles could talk, this is probably what they'd say. speedmob.com (510) 232-4040 22 | DIRTRIDER.COM





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# DIRT WRITER

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# MAKE YOUR BIKE CLICK WITH YOU

I have a local track that has some medium-size whoop sections. My brother and I ride there a lot. One day I couldn't take my bike, so we took turns on his Suzuki RM85. I came into a whoop section really fast and rode smoothly over them. I felt so comfortable in the whoops; it wasn't rough like before. I learned later that my Yamaha YZ85's rebound was cranked up! So we adjusted it and

I felt a little smoother on the whoops (but not as smooth as the RM). My brother's RM85 is kinda tricked out and has some aftermarket parts, but I just wanted to get a little advice from the pros at *Dirt Rider*! What is your recommended rebound setting for a YZ85?

# Paxton Church Lake Almanor, CA

It sounds like you need to do a little more testing with your YZ85. Don't be afraid to experiment with your clickers on the suspension. The RM85 will handle differently than your Yamaha in certain sections of the track. Before you go dumping money into modifications, try different suspension changes, and make sure the sag is correctly set on your shock (that should be first and foremost). Look at your owner's manual for the correct stock settings and work from there.

If it is kicking you in the whoops, try slowing the rebound down two clicks at a time on the shock. If

it gets better, then try one more in that direction. Remember that each change you make to your shock will make your fork work differently as well. Make sure to make small changes, one change at time, and try working toward a better handling motorcycle first with stock parts before throwing money at it. And take good notes of each change. You should also read the "How to Test" story in this issue to help you conduct a more in-depth analysis. —*Kris Keefer* 

# GETTIN' BUSY, GETTIN' DIZZY

I am reaching out for guidance to help create the Escargot-style course you guys have done a few times. My idea is to set up the Escargot course near the pits at one of our desert events, charge a reasonable gate fee for a split-the-pot or donation to a good cause, etc. I am curious about the rough diameter of the outside of the circle, the width of the lanes going in and out, or any other tips. Any help is appreciated!

Cory Jennings Reno, NV

Thanks for reaching out about the Escargot! Since building our first one at a *Dirt Rider* Torture Test nearly 10 years ago, we've found that Escargots are a super-fun training tool and a safe/popular challenge, and we've seen more and more of them popping up at US-based races and events. The trick to successfully building an Escargot is to start from the inside out; it all begins with a single stake in the ground. From there, you want to leave enough room for the rider to do a complete circle around the middle, then work your way out (going either clockwise or counterclockwise; it doesn't matter since you have to go both into and out of the Escargot to make a complete lap).

Regarding width, a good index is to make each lane just wide enough to ride a utility quad through. We've tried making them narrower, but this resulted in riders leaving the lanes more than we liked. We usually try to go about three to five complete circles, not counting the very middleyou'll be surprised by how much room this takes up, and you'll probably get a 30- to 40-second lap time, with a nice berm built up by the end of the day. Experience has also taught us that it's better to use stakes or cones than banner tape, mainly because you'll get the occasional rider who gets squirrelly and goes barreling out of a lane. The only other piece of advice I'd add is do not, under any circumstances, allow more than one rider on the Escargot at a time... It then becomes a "poulet"! —Chris Denison

# SWAG OF THE MONTH





# NEED A BIGGER HOLE IN THE HEAD

Is there any benefit to increasing valve size on a Honda CRF250R? I bought the Athena big-bore kit and was wondering if increasing the valve size would be a good mod to get done in addition to the big-bore kit.

Adam Barker South Grafton, MA

# LETTER OF THE MONTH

Increasing valve size will increase flow in your cylinder head but you won't get the full benefit unless you port your head to match the valve size. Think of it like putting a 2-inch sprayer on the end of a 1-inch hose. —Scot Gustafson

# TRY SMOKELESS COOLANT

Hey, guys, do you have any tips on getting my 2007 Suzuki RM125 to stop blowing so much smoke? The bike runs great; I have a 40:1 mix in it, and I have been using the smokeless formula oil. What I've noticed is that it will shoot a big cloud of smoke right as it hits the powerband. I know this is normal after it just starts up, but even after a 15-minute moto I notice it still lets out some smoke as it hits the powerband. If I am really on the gas a lot, it will stop smoking entirely for a minute or two, but as soon as I go through a tight section on my local

track it will blow some smoke again on the next straightaway. I don't think it's a jetting issue, but could that possibly be a reason?

# Jake Carella

# Via drmail@bonniercorp.com

Check to see if you are losing coolant or transmission fluid. Your bike uses two O-rings in place of the head gasket, and these are very susceptible to wear and should be changed frequently. You can tell if you have a bad coolant leak by removing the radiator cap and starting the bike to see if the coolant foams up when the bike is running. When you replace the O-rings, check and make sure the head is flat and has not become warped. Another cause for excessive smoke is a leaky main seal on the transmission side. Open up your oil fill plug, and if the smell is rank and knocks you over (and doesn't smell like burned clutch plates), you probably need to replace that seal. —Scot

# **FACTORY VS. FROM THE FACTORY**

I just read the 2015 450 shootout (March issue). Every year these bikes get little tweaks and improvements. How much better are they getting? Could you compare this year's shootout winner or loser with a stock 450 from 2005 and a factory racebike from the same time?

# Pete Wheeler Danbury, CT

Great question! Having been a test rider for every 450cc MX shootout since 2005, I can tell you that the bikes have certainly improved quite a bit in terms of power output, suspension performance, and overall technology (holeshot assist and switchable ignition maps are pretty darn cool features!). That said, we do feel as though the air fork found on many of the 2015 machines was a step backward, mainly due to its complexity and some shortcomings in performance. Nevertheless, these bikes would kick the pants off of a stock 2005. Now, as far as comparisons between factory machines, that's a bit tougher to answer. I've ridden a number of factory bikes in the past 10 years, and each one of them was highly customized to fit the specific preferences of its everyday pilot. Because of this, you kind of need to look past the setup quirks of a factory bike and try to wrap your head around the overall performance. Some riders would feel more comfortable on a modern-day stock bike, while others would prefer the factory steeds of a decade ago.

Personally, I think that factory bikes are on a different level than stockers, and this barrier in trickness transcends time. In other words, I'll take a factory bike from 10 years ago over any stock 2015. They are just that good—even back then! —*Chris* 



# DIRT WRITER



SHOOT, TAKE A LOOK AT THIS!

I am a part-time photojournalist and sports/ portrait/event photographer. I was wondering if you purchase photos and/or contract with photographers for specific events.

Frank Smith Giddings, TX

We will happily look at a couple of your shots if you shoot an event, but we are not looking for a

Texas-based photographer right now. Just send them to drmail@bonniercorp.com. Only send a few, in small file sizes, and make sure the total files are under 2 MB. —Pete Peterson

# RETIRE THAT BIKE

I was saving the December 1 was saving the December 2014 issue because I wanted to order the Product of the Year—a tire changer—but I lost the magazine. Would it

be possible for you to email a copy of the Product of the Year article? Or even a URL where I can order the Tire Changer? Or sell me a reprint of that issue?

I really hate changing tires so I pay about \$30 (each) plus gas for a long trip to the bike shop to get them changed twice a year, and for four bikes that's a lot of tire changing. This tool, if it's as easy to use as you say, would pay for itself in six months! Can you help out a

59-year-old dirt bike enthusiast? **Bill Slawson Aurora, CO** 

Good job keeping fresh tires on your bikes; that is one of the best "mods" you can make, but at \$30 per change you are doing it the expensive way.

The product you're thinking of is the Baja No Pinch (add a .com to that and you have a URL), but if you can hold off the next trip to the bike shop, you might want to wait until you see a comparo test we have with another tire-change-help device that we should have done for next month's issue.

These devices still don't make it as easy as handing over the tire to someone else to change, so you'll still need to develop your tire-changing skills. One of the keys is to watch the tire opposite of where you're pulling it on or off the rim—the tire's beads opposite from where you're working the spoons should be squeezed together and pushed down into that center trough that most rims have. This gets the bead on your work side furthest away from the rim.

If you need some inspiration, go to a supercross or national and spend five minutes watching the Dunlop guys change a tire. Yes, I said *five* minutes. —*Pete* 



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# THESPEED

# of SUPERCROSS

FACTORY HONDA FLIES THROUGH OUR RADAR TRAP

Story By Pete Peterson · Photos By Adam Campbell



upercross racers sometimes get asked by fans, "How fast do you go?" It's a question that has no real relevance to racing, but at some point you've probably wondered it yourself. With the factory bikes' GPS units and crews of technicians, we're sure the teams have these figures in their files somewhere, but they don't share them with fans or even their own riders. Well, we're *Dirt Rider*, we share, and we thought it would be fun to get a radar gun (or two or five) and pull some top-speed figures out of a supercross lap time.

When Team Honda HRC allowed us access to a practice session at its private SX track on a late-January test day, we knew we wanted to bring the best speed measurement technicians in the business, and our first choice was the Los Angeles Police Department. Fortunately, these guys are all about helping educate the *Dirt Rider*-reading community, and we got some radar officers to meet us at the track with a collection of speed-detecting equipment. As factory Honda HRC riders Trey Canard and Cole Seely and GEICO Honda racers Eli Tomac and Justin Bogle put in practice motos, the officers set up speed traps around the 50-second-per-lap track, under the watchful eye of LAPD Chief of Police Charlie Beck himself.

# **WHOOPS**

## **38 MPH**

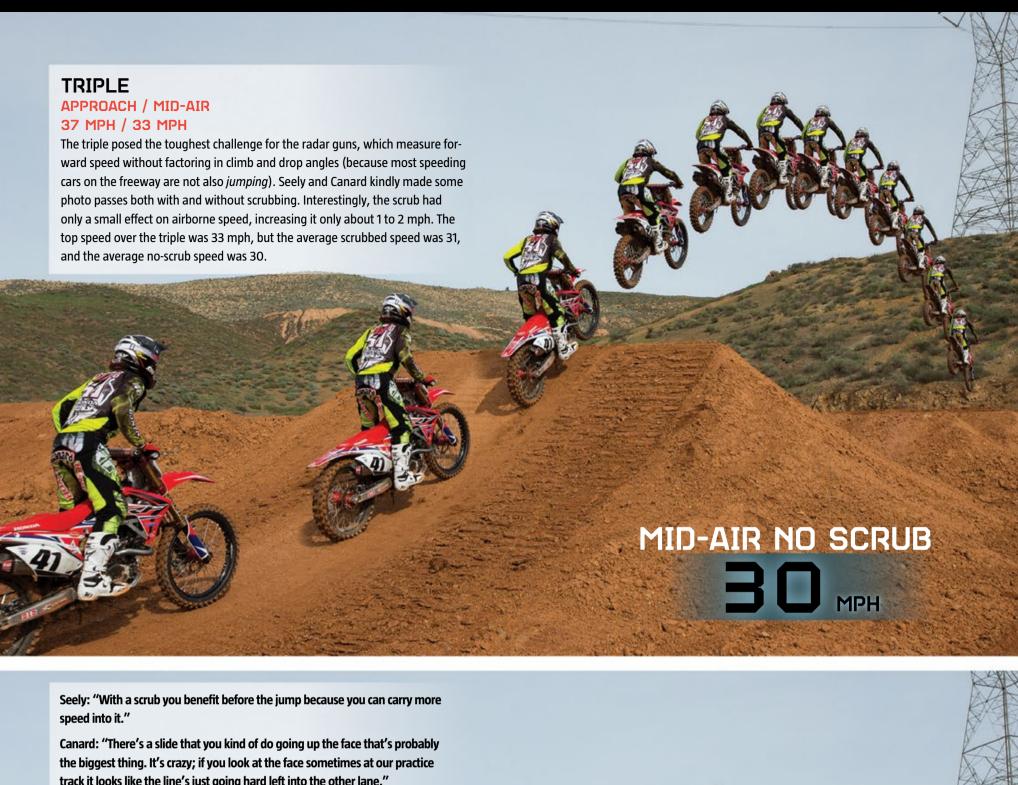
The Honda test track whoops were placed between two 180-degree bowl turns. They were pro-size whoops but evenly spaced and not as treacherous as some racetrack whoops can get. The riders' whoopskimming speeds ranged from 34 mph up to 38 mph. Once in the section the riders could sometimes gain about 1 mph, and we often detected a drop of 1 mph at the very last whoop as the riders shifted their focus to the turn that followed.

Tomac: "I would say the most surprising number is the whoops.

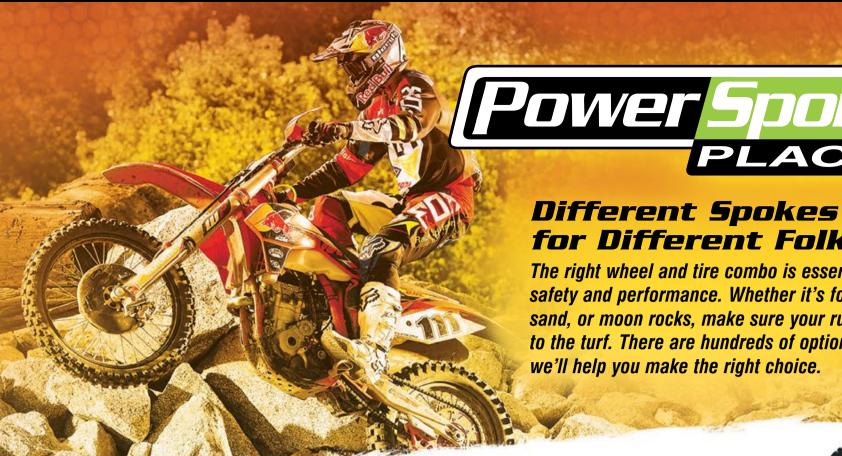
Thirty-eight! That's pretty fast! I would say the most important thing is your entry and then your front-wheel placement going in. I like to place my front wheel on the third whoop."

Seely: "Anytime you have a whoop section out of a turn it's always harder than when you have a triple or a double or something where you're gaining speed before them. The practice track whoops are pretty relatable to the race whoops. Maybe a little easier, but we kind of asked for them to be built that way so we're not practicing on whoops that we can get hurt on each week. Yeah, they're about the same speed I'd say as a stadium track's whoops."









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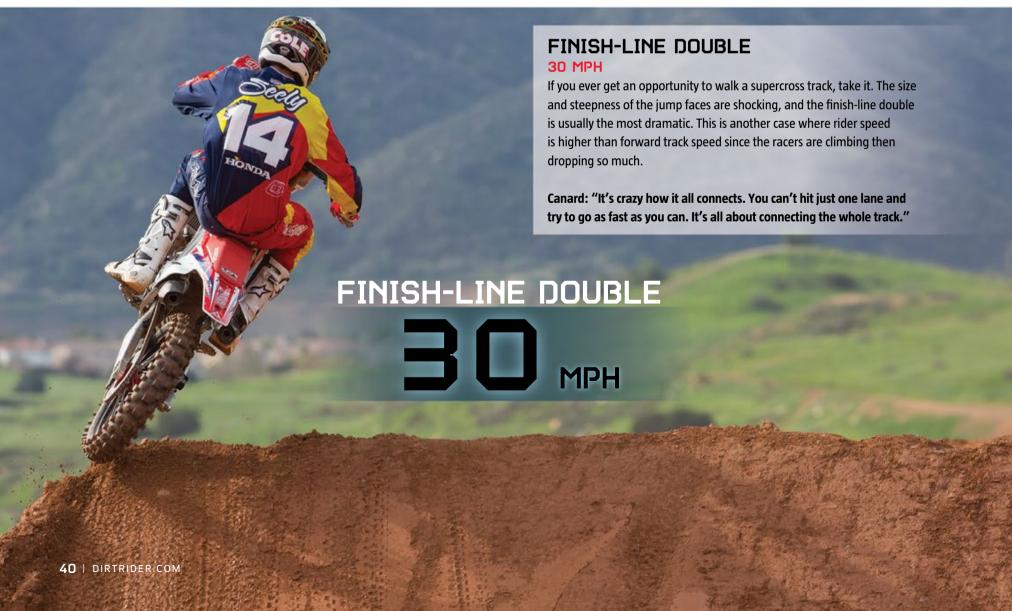


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#### STEP-ON, STEP-OFF

#### 41 MPH

This was the fastest track section (not counting the start straight), which is surprising but makes sense once you realize the riders are jumping on fast and low then accelerating hard across to leap off.

Tomac: "When you're riding and get it in the zone, it wouldn't really feel like 40 miles an hour, I guess. Forty might feel slow in a car, but if you're outside of a big cage like that, it should feel fast!"

#### **BOWL TURN**

#### ENTRY / MID-TURN / EXIT 36 MPH / 17 MPH / 28 MPH

For this section three radar officers read the rider straight on at the three sections of the turn. The three speeds shown here are from the fastest run.

Seely: "I think the main visual marker that most of us use without even knowing it is braking bumps. Whether we're hitting them or going just to the left of right of them, it's just like second nature. You see your braking bump and you know, 'Okay, I'm hitting the brakes right here,' or, 'I'm hitting the brake right after them,' or something. I think that, for me, is the best track marker to use because you don't have to look left or look right. It's always right in front of you."

#### **FLAT TURN**

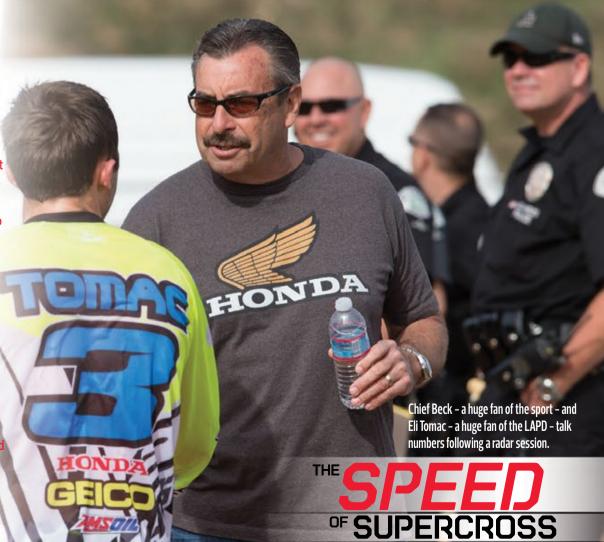
#### **24 MPH**

We lucked out with weather on our test day, and the dirt was in great shape two days after a rain, so traction was high in the flat turn.

Canard: "When you're having a good day, time does feel like it slows down, for sure. I don't know, it's like everything's easy. But some days everything goes extra fast. So it's really nice when you have those days when time slows down."

#### THANK YOU!

The Los Angeles Police Department gets a big thank-you for their help gathering the data for this story. We have access to a radar gun, but we wanted to call in the experts, and they definitely delivered. The boys in blue brought several different types of speed-measuring guns (radar and laser) and explained some of the challenges of gathering accurate readings. In short, the operator should be as straight in front of the object's direction of travel as possible. That's not realistic for big jumps at a track, and we chose not to alter the numbers, but we were told that you could add 2 to 3 mph to the triple-jump and finish-line speed readings to approximate the rider's actual forward speed. We learned about cosine issues, which create inaccurate (too low) readings when taken at an angle. This is why we set up three officers to track bowl turn speed—so we could get exact readings from the same run to better show the deceleration and acceleration. Thank you to all the officers and also to LAPD Chief of Police Charlie Beck for making this story possible. Another big thank-you goes out to everyone at Team Honda HRC. The Red Riders rolled out the—what else—red carpet and gave us access to one of their test days. Even cooler, the technicians were curious to see our numbers, and the highlight of the day was when Trey Canard, acting like a kid who just loves dirt bikes, circled back around one extra time to try to top his scrub speed.





#### DRAGON'S BACK

**37 MPH** 

After the 180-degree turn we used to clock the bowl turn speed, the riders had to leap up the ascending bumps and drive off to the step-on step-off.

Seely: "That whole section specifically is about carrying momentum from your turn through the obstacles and into the next turn. That one especially, I'm surprised it's as fast as it is because it's one that you think, when you're doing it, 'I can't get through this fast enough.' It's like you constantly want to go faster and faster and push it more each lap.

#### START

**48 MPH** 

The practice start area was 195 feet long, though the riders overshot the turn marker on their fastest runs. The riders started in second and clicked up to third.

Tomac: "The start itself is also surprising because we're only hitting third there. Zero to third gear, I guess a 450's pretty fast!"

These speed figures will vary from track to track, but the test track numbers are likely the same as what you'd find on any other supercross track, and our data will give you some concrete answers to the questions you've surely wondered about—even if you're a pro racer.

Canard: "I get the question, 'How fast do you go?' all the time, especially with people who don't know much about the sport. We don't have speedometers, but I guess I can tell 'em now!"

Tomac: "You do get that question occasionally, and honestly I've never known. I've kind of guessed maybe 50 miles an hour on an outdoor track, but I never knew for supercross."

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lugging region is nice, but the real fun starts when the 200's power valve opens and the revs come to life. Here, the KTM is a screamer, waking up to a midrange pull that accelerates with authority into the top-end and feels like a souped-up 125 or a free-revving, slightly underpowered 250cc two-stroke. Once well into the top, you'll feel the power curve begin to round out before one last little ultra-high rpm hit kicks in prior to the power going flat. On medium-pace trails, we felt as though the 200 could pull a smaller rear sprocket—first gear was winding out somewhat fast—yet we rarely encountered the rev ceiling anywhere else.

- The suspension works well 85 percent of the time. There's a high degree of comfort to the KTM's WP front suspension, with a plush feel that absorbs most hits and standard chop in a balanced manner. The shock required very little tuning, other than setting the sag and making minor tweaks to slow down the rebound when the bike felt as though it was dancing around. The 15 percent of the time that the suspension doesn't work well is when the fork is pushed too hard, primarily through big/repeated hits (such as those you'd find entering a rough corner at speed) or hard G-outs. When fully bottomed, the fork tends to stay down in the stroke, which makes the back end feel light and can cause the rear to kick and lose traction. Luckily, this is not a frequent occurrence, and most of the time the suspension remains in a plush, balanced state.
- Lighter handling is tough to find. Our scales had the 200 XC-W at 236 pounds soaking wet, but it might as well have been 200 given how light the bike feels (and that's with electric start!). This lightweight attitude makes the KTM easy to wheelie, effortless to change direction on, and fun to lean into turns. There's a midcorner tendency to stand up/fight the rider, but

initial turn-in is a dream. Naturally, a steering damper (which would increase stability at speed) would improve handling even more and might prevent the light-feeling rear end from stepping out.

- The details are outstanding. Thanks to electric starting, the 200 XC-W starts like even more of a dream than it would with only the kickstarter (we'll take the added weight of the electric unit). The clutch engagement is light yet precise, and the brakes are more than sufficient to bring the bike to a halt in a hurry. Even the headlight is better than expected and will help you safely find the truck if you stay out after dark.
- Yes, 200cc is an awesome displacement. Believe it or not, the 200 is not that far off from a 250 in terms of performance, and it's right there as far as the fun factor goes. The little bike could use less

vibration and more pulling power over open terrain, yet for tighter trails it doesn't lack much. There's broader power than a 125—the 200 is more potent than smaller machines—though it definitely feels more "125" than "250." Don't be worried about riding or racing the 200 XC-W off road alongside larger machines; it can hold its own, and some aftermarket attention can bring out an aggressive side to this engine that will send thumpers running for cover. But

if someone with a four-stroke does sneak past and feed you a serving of roost, simply remember my favorite things—then you

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# FASTER?

he 2015 Yamaha YZ450F won our 450
MX Shootout (March issue) and for
good reason. A strong motor, balanced
chassis, and great "spring" suspension
all turned the heads of every tester who
rode the Yamaha. But when approached by Yamaha to
see if we wanted to let the GYTR guys install their "gofast" engine parts along with adding some Yamaha

Parts and Accessories bling on the bike, we said "yes" very reluctantly. We love the stock engine character of the 2015 motor, but we were curious if modifying an already proven stock package would actually be better for a wide range of riders, not just pros. We did, however, leave the suspension stock, as most testers liked the comfortable stock suspenders.

You'd think there would be a long list of modified

motor parts to this bike, but in actuality the list is on the short side. GYTR put on its CNC milled and ported cylinder head assembly (complete with valves and camshafts installed), high-compression 13.5:1 piston kit (which requires the use of 100-octane or higher fuel), GYTR/FMF full titanium muffler system, and a GYTR billet clutch kit. Other sprinkled goodies consisted of a GYTR clutch cover, billet ignition cover,



sprockets, chain, fork bleeders, graphic kit, chain blocks, air filter, water-pump guard, plastic chain guide, and rear brake disc guard.

We used a stock 2015 Yamaha YZ450F for our baseline comparison every time we went out to the track with the GYTR YZ450F. This helped us really narrow down what was better or worse with the modified version, and it came in handy on more than one occasion. When you add horsepower to a 450cc machine, the key ingredient is smooth, usable power. You don't want to have the bike shoot out from underneath you when you come out of a corner. Sure, it feels exciting (for about one lap), but it will wear you out during longer motos, and you will find yourself making more mistakes trying to control all of those ponies. The great thing about GYTR's ver-

sion of the 2015 YZ450F is how smooth the roll-on power is coming out of corners. It rolls on with just a little more authority than the stock version (but not too much where it feels like a 2010 YZ450F) and keeps as much traction to the rear wheel as the stock YZ-F.

We did experience a slightly dirty feeling from 0 percent throttle to 5 percent, so we adjusted the fuel map on the GYTR Power Tuner to help clean that area up (see the map at the end of this story). The GYTR engine smoothly transitions from the bottom-end to a huge midrange that will get your attention in a hurry. The midrange can be slightly too much to handle (for novice riders) on tighter tracks with many 180-degree corners. Faster-style tracks are where you can really appreciate the added meat of the midrange pull. We used the stock 13/48 gearing and could use third gear around almost every corner of every track we went to, which the stock bike can't do quite as well (even our novice testers who have slower entrance speed in corners could pull third gear in most turns). The top-end pulls slightly farther than the stock version, but this is not as noticeable as the sheer torque increase of this motor. Where top-end is most noticeable is when we went to sandier or loamy-type tracks. The deeper the track was prepped, the longer each tester could leave the throttle on and could really feel the pulling power of the GYTR engine.



If there was a downside to this monster of an engine, it was that we experienced more engine-braking. When rolling the throttle off coming into corners the front end wanted to dive more, which gave the feel of more frontend traction but left us with a harsh-feeling fork. It took some time to get used to this, and making adjustments to the fork (stiffening compression and slowing rebound) helped the front end dive less, but "Big Blue" does pitch more than its less-horsepowered relative. We have put close to 35 hours on all of the GYTR parts with no failures, and valve clearances are still in tolerance. (Note: We have changed the oil every four motor hours and put in a fresh oil filter at every other oil change.)

You shouldn't be afraid of more horsepower, but do be afraid of not being able to control the horsepower that some modifications make out on the track. The GYTR mods made very noticeable gains (and kept what we loved about the stock engine character) but made it even easier for the rider to ride out on the track. After testing the 2014 YZ250F GYTR engine mods in the September 2014 issue we felt the rider should have been able to feel a bigger difference out on the track (especially for the cost). The 2015 YZ450F GYTR modifications do just this and give the rider noticeably more bang for his or her hard-earned buck with added excitement while maintaining Yamaha's proven reliability.







#### **FUEL MAP**

| FUEL               |     | RPM  |      |      |
|--------------------|-----|------|------|------|
|                    |     | 4000 | 6500 | 9000 |
| Throttle           | 3/4 | +3   | +7   | +3   |
|                    | 3/8 | +3   | +7   | +3   |
|                    | 1/8 | +3   | +6   | +3   |
| IGNITION           |     | RPM  |      |      |
|                    |     | 4000 | 6500 | 9000 |
| Throttle           | 3/4 | +2   | +1   | +2   |
|                    | 3/8 | +2   | +2   | +2   |
|                    | 1/8 | +2   | +2   | +2   |
| USING VP U4.4 Fuel |     |      |      |      |

#### PARTS LIST

| GYTR: YAMAHAPARTSANDACCESSO  | RIES.COM  |
|------------------------------|-----------|
| PORTED CYLINDER HEAD:        | \$1999.99 |
| HIGH-COMPRESSION PISTON KIT: | \$239.99  |
| 4.1 TITANIUM MUFFLER SYSTEM: | \$679.98  |
| BILLET CLUTCH BASKET:        | \$212.49  |
| BILLET PRESSURE PLATE:       | \$152.95  |
| BILLET INNER HUB:            | \$279.95  |
| BILLET CLUTCH COVER:         | \$137.95  |
| POWER TUNER:                 | \$279.95  |
| BILLET IGNITION COVER:       | \$234.99  |
| BILLET OFFSET AXLE BLOCKS:   | \$43.95   |
| PLASTIC CHAIN GUIDE:         | \$82.49   |
| WATER-PUMP GUARD:            | \$44.99   |
| RADIATOR BRACES:             | \$99.99   |
| REAR BRAKE DISC GUARD:       | \$103.99  |
| HIGH-PERFORMANCE AIR FILTER: | \$15.95   |
| REAR SPROCKET:               | \$61.95   |
| COUNTERSHAFT SPROCKET:       | \$24.99   |
| X-RING GOLD CHAIN:           | \$87.49   |
| REAR BRAKE CLEVIS:           | \$48.95   |
| FRONT BRAKE LINE PINCH:      | \$36.95   |
| GRAPHICS KIT:                | \$79.95   |
|                              |           |

#### WANT MORE?

CHECK OUT THE 2015 YAMAHA YZ450F RIDING IMPRESSION AT DIRTRIDER.COM/ FEATURES/2015-YAMAHA-YZ450F-VIDEO/.



usgvarna is one of only three manufacturers (in addition to TM and Gas Gas) to have a 125 two-stroke off-road motorcycle. New to the American Husqvarna lineup this year is the TE 125. Comparing the TE to the TC motocrosser, there are quite a few key differences: The TE 125 has a heavier crank, a heavier flywheel, and a different-shape head to boost bottomend torque. The carburetor settings are also adjusted to help make the 125cc engine more off-road friendly. The addition of an 18-inch rear wheel and a headlight are also included in the off-road package. The settings on the WP 4CS fork and the WP shock are valved softer for the rigors of off-road terrain and a Magura hydraulic clutch is standard on the TE, instead of a Brembo unit that is seen on the TC models. We originally tested this model in Sweden last year (the 2014 model wasn't imported into the US) but got our hands on a 2015 version here on our

After our maiden voyage we decided we needed to add a couple of important modifications to the 2015 Husqvarna TE 125. The stock seats that come on all of the Husqvarnas are as slippery as fork oil on a garage floor; they don't provide any grip whatsoever for your rear end, so we installed a One Industries gripper seat cover to keep us from sliding off the little 125. We also wanted to be able to try and hold the TE wide open across fast desert valleys (not just tight woods riding), so we put on a GPR V4 steering stabilizer (mounted with a GPR top triple clamp combo) to try to get some additional straight-line stability (more on that later).

own turf to see how it handles American off-road soil.

If you're looking for torque out of your motor, you will have to look somewhere else. The engine character on the TE 125 is soft and smooth initially and then will reward the rider who rides very aggressively. After



getting used to the soft bottom-end power and fanning the clutch, we really began to enjoy the TE 125. Mid- to top-end is where the fun meter will be at an all-time high. This Husqvarna really shines on flowing single-track (think enduro grass-track special tests). We found out quickly that this bike wasn't designed for wide-open desert riding.

Just like riding any other 125cc machine, the TE 125 requires constant shifting and work from the rider. Our most novice tester really struggled with the engine character, mainly because he couldn't lug this bike at all. If you are able to work for it, the payoff is extremely fun and the rider is able to get down the trail at a good clip. While riding across a long, fast section of dirt road we could see on the speedo/odometer dash that the top speed of the TE was around 68 mph, but getting to that speed is the tricky part. The jetting was a little rich as well, so we leaned out (raised) the needle clip one position, and this made the midrange extremely clean and crisp. Some testers felt the Magura hydraulic clutch wasn't quite as good as the Brembo design. "Grabby" is how one test rider described it when he got into tighter sections that required more clutch use.

The TE 125 chassis likes to be ridden across medium-fast, choppy straights and smaller braking bumps and does so fairly comfortably. The soft suspension makes small, square-edged chop very comfortable for the rider (even when the stabilizer is turned off). However, the 4CS fork does move through the stroke rapidly without much damping on larger G-outs or bumps out on the trail. Even when cranking up the compression on the fork, it still should have a little more hold-up for aggressive riders. The rear of the bike stayed straight and gave us a planted feeling everywhere that inspired confidence even with our faster testers. There



was always tons of traction at the rear wheel even when some testers felt like they were in a low gear wringing the motor out.

The benefit of the GPR stabilizer with smaller, lightweight two-strokes is that it makes the front end feel more planted to the ground. The Husqvarna feels so light that it can be flicked around in tighter sections with ease, but when you get to some rockier sections that lightweight feeling can backfire. You will find yourself deflecting off of rocks more than you would on a four-stroke, so the extra damping in the handlebar makes for a smoother ride over nastier sections of the trail. Standard Brembo brakes are also a huge plus and will get you stopped in a hurry without being too touchy on steep downhills.

We applaud Husqvarna for keeping small-bore, twostroke off-road machines alive and well in America. There is still plenty of fun to be had on this screaming, lightweight, premixed machine. Just be prepared to drink an extra cup of coffee before heading out on the trail to get you extra hyper because that's how the TE 125 likes its riders!

#### SECOND OPINION

#### CHRIS DENISON

HT: 5'10" WT: 155 LB. OFF-ROAD EXPERT

Lightweight and pipey, the Husqvarna TE 125 has an energetic personality, yet it takes some effort to ride the right way. Peak power is located well into the upper midrange, and to stay in this window takes a lot of clutch work and momentum carrying. There is no lugging this machine; the on/off power requires that you fully commit to being wound out at all times. I like the fact that the TE 125 forces you to carry speed and stay on the gas, but I simply want more power out of an off-road bike. When you come screaming into a nasty section, there isn't much meat left over to help you pop up a rock ledge or to blip over a big log.

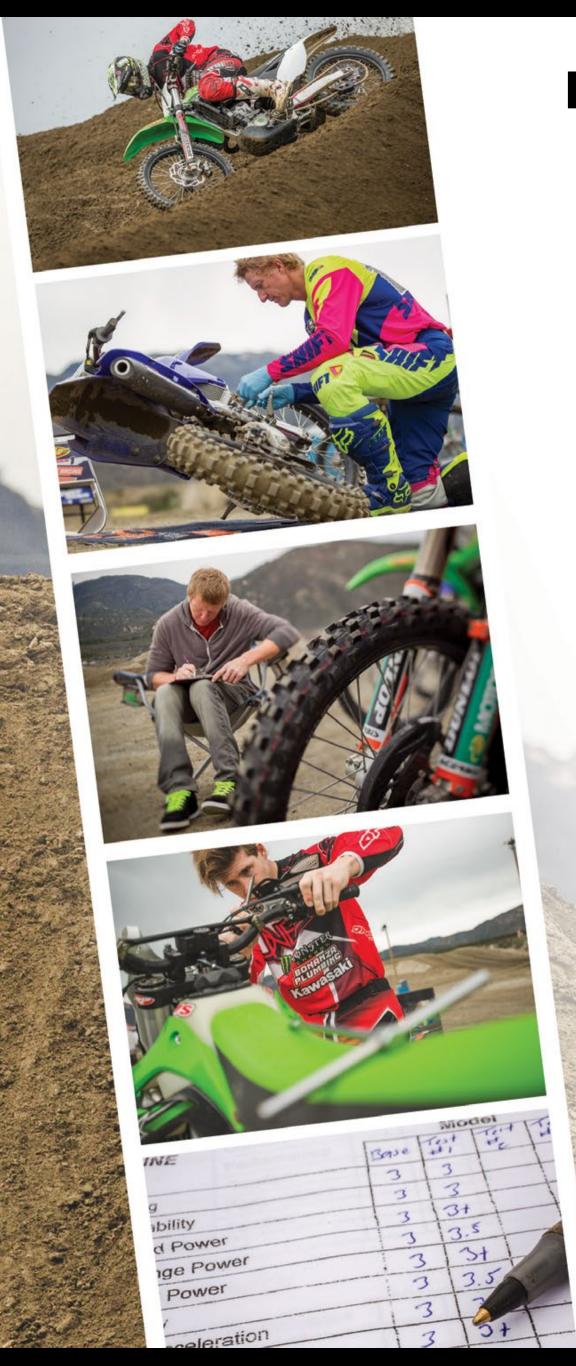
For such a lightweight machine, the handling is fairly stable—no doubt aided by the steering damper. Cornering didn't feel completely seamless to me, but I think that a lot of this is due to the power. This is a fun bike to play on, but I wouldn't want to go race it when there are 200/250cc two-strokes out there that require so much less work to ride fast.





great job to have, it takes a considerable amount of experience and technique (just like being able to go fast on a motorcycle) to be able to evaluate a dirt bike and/or parts correctly. Even some top professional motocross athletes aren't very good test riders. Some only know one thing: to turn the throttle wide open and ride as fast as possible. There are only a few top riders who are really in tune with their bike settings and can relay that information back to their mechanics and engineers to achieve the best setup possible. I raced professional motocross and supercross, and while I wasn't fast enough to make a living on my speed alone, I have been able to make a living testing motorcycles for a couple of manufacturers and many aftermarket companies in the motorcycle industry.

aftermarket companies have to make motorcycles and parts that can please a wide target of riders. Therefore, if you know how to properly evaluate your bike, you can tune it to be precisely tailored to you. If you don't dial in your bike—or worse, do it wrong—you're cheating yourself out of faster lap times, being more comfortable, and having a better motorcycle for yourself. There is an old saying in testing: "You are only as good as what you try." You don't have to be the fastest guy or gal in the world to be able to evaluate a motorcycle, but it does take patience and some proper knowledge and understanding of mechanics about how a dirt bike is supposed to function. What about the average weekend warrior? How is he or she supposed to know the right way to set up a bike to have a better motorcycle? Here are some key points and insider tips to help you evaluate and test parts, settings, or bikes on the track or trail.



# 

#### test

#### verb | \'test\

take measures to check the quality, performance, or reliability of (something), especially before putting it into widespread use or practice

#### THE RIGHT WAY TO MAKE YOUR MACHINE BETTER

Story By Kris Keefer · Photos By Justin Kosman

DIRTRIDER.COM | 55

## TEST ME

#### MAKING A SCORE SHEET

Make yourself a score sheet with all the things you will be testing on any given day/time. You can break the score sheet down how you choose, but a numerical system seems to work the best. Also, make sure to include location, date, time of day, temperature, humidity, make and model of bike, as well as track or trail conditions. Keep a log of every time you create your own test, and use it as your bible, so to speak, for future reference. Here is how it can be done:

3 = BASELINE SETTING 3+ = SLIGHTLY BETTER; BARELY NOTICEABLE 3.5 = BETTER IN MOST AREAS 4 = BETTER IN ALL AREAS

If the current setting is not as good as a "3," then it should be looked at as unacceptable, and you should rethink using that setting. For more of a breakdown on categories see the "Want More" link.

#### **GETTING STARTED**

The most important thing to remember when you test is your starting point. Whether it's your old bike you're trying to improve with aftermarket parts or you're trying to figure out which bike to buy, testing is all about trying to improve from where you are currently. In addition, don't make changes to your bike just to make it look cool! Sometimes bolting on those blinged-out aftermarket triple clamps or that super-lightweight titanium muffler system will decrease your motorcycle's performance on the track or trail. Don't just assume because the aftermarket companies have something for your bike that the piece will be better than stock. Tons of man-hours, money, and development go into making your production bike perform the best it possibly can. Yes, even that stock muffler you got on there! When putting on aftermarket parts, put each accessory on one at a time to ensure it doesn't make



your bike run or handle worse than what you already have.

Make sure when you have everything you are testing, all of it is laid out so you can do the quickest and most efficient turnaround possible. Back-to-back testing is the best way to get the most out of your evaluations. Skipping days or taking too much time leaves room for inconsistent results. Your starting point is what we call "baseline." A baseline setting is the setting that everything else you try will be measured against. Anything you test and keep on your machine should rate above your baseline setting.

When testing, you never want to try too many things (three to four combinations max) before getting back to your baseline setting. This means you might have to go back and revisit your baseline setting a couple of times (if you have several bikes or parts) so you don't lose the feeling of what that baseline is. Also, make sure you don't cram in 10 things on a day to test. You will get lost and find yourself going in circles on your evaluation score sheet. Try to keep to only a few parts to test per day when starting out. If you find yourself with several different types of the same part to test, break them up into different days. Find the best two settings (each day) and then create a final day to decide on which way to go and what you will be sticking to.

### "THE MOST IMPORTANT THING TO REMEMBER WHEN YOU TEST IS YOUR STARTING POINT."





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## TEST ME

#### TESTING AT THE TRACK/TRAIL

Another important aspect of testing is making sure you are doing things correctly on the track or trail. If you ride off-road, you need to evaluate on that type of terrain, so make sure you set up a loop that you can hit consistently that doesn't take you too long to complete (15 to 20 minutes max). Keep it short so each time you switch parts or bikes the memory of your baseline setting is in your head.

Similar to off road, keeping it short at the motocross track (no more than four to five laps) is optimal. One of the big reasons to do this is second-guessing your initial impression. If you are out there too long, your mind can wander and you can second-quess yourself and your initial impression. Another key thing is to try and hit the same line (once formed) every time you go out. If you take different lines (which could be faster), your evaluation will be skewed. You want to make sure you and your bike are familiar with the exact same lines, bumps, jumps, ruts, rocks, and hills so when you try a new piece and it reacts differently (good or bad) you know how to rate it on your score sheet. This will determine if you are going in the right direction or not.

#### **BLIND TESTING**

This type of testing is usually how each manufacturer evaluates. Typically when a manufacturer is narrowing down a specific part of a new bike, testers will not know which part is being replaced. It is up to the test rider to give the proper feed-

back to the engineers, which then tells the engineers what direction to go.

Example: If the engineers have three different camshaft settings to try, each camshaft will be marked on the engineer's score sheet (this sheet is separate from the tester's sheet) and will be put into the motorcycle in no specific order. Manufacturers will use two or three test riders when narrowing down parts to ensure proper

direction. Each tester will not know which cam is in the bike, and after all the options have been run through the test then engineers will go over all of the notes to see if all or most of the test riders agreed on the performance changes. There are cases where some parts (or specs) may be split 50/50, in which case engineers decide which direction they want the bike to go based on what the testers' notes have to say.







#### TESTING TERMS

Want to use more testing terminology in your vocabulary? Or maybe you just want to impress your buddies? Here are a few common terms test riders use while communicating with engineers. You might already be familiar with some of these terms from reading the pages of *Dirt Rider*:

**RIDER TRIANGLE:** The rider triangle refers to the cockpit area that consists of the handlebar-to-seat-to-footpeg position. The rider triangle is important to understand when setting up your riding position, also known as ergonomics.

**BLOWING THROUGH:** This is a term when either the fork or shock loses its damping feel and there is no hold-up in the suspension.

SUSPENSION PERFORMANCE: Some manufacturers or suspension shops valve for "performance" versus comfort. Performance is a term used by test riders when there is more hold-up in the suspension around the track. A rider can ride harder and charge into bumps and jumps without the suspension feeling mushy.

**SUSPENSION COMFORT:** Comfort is more of a term for plush-feeling suspension. Valving for comfort, you will get more movement in the suspension when the track gets acceleration bumps out of corners or choppy square edges coming into corners.

**FLICKABILITY:** The center of gravity—or CG—feeling is a common focus among today's motorcycle builders. Most all the manufacturers are shifting the bulk of the weight in the engine low and into the center of the motorcycle. This gives the feeling of maneuverability or of a bike being "flickable" on the track or trail.

**FORWARD BITE**: This term can relate to rear-wheel traction, or it can be used when the rear suspension squats out of a corner (instead of riding high in the stroke) and gives the rider maximum traction under load.

**PULLING POWER:** When rolling on the throttle out of a corner this phrase is used to describe how much torque feeling is between the rider's legs.

RPM RESPONSE: This is how the crispness or instantaneous feel of any given rpm range is measured. It can be immediately coming out of a corner (low-rpm response), shifting from second to third gear down a straight (mid-rpm response), holding it wide open then shutting off the throttle for split second and then back on again (top-end rpm response). This is often adjusted through FI settings or carburetion.

**DIRTY:** This describes motor character testing if the bike feels rich or has a blubber/hiccup. The rider may feel it under acceleration or under load.



**Performance Plastics** 

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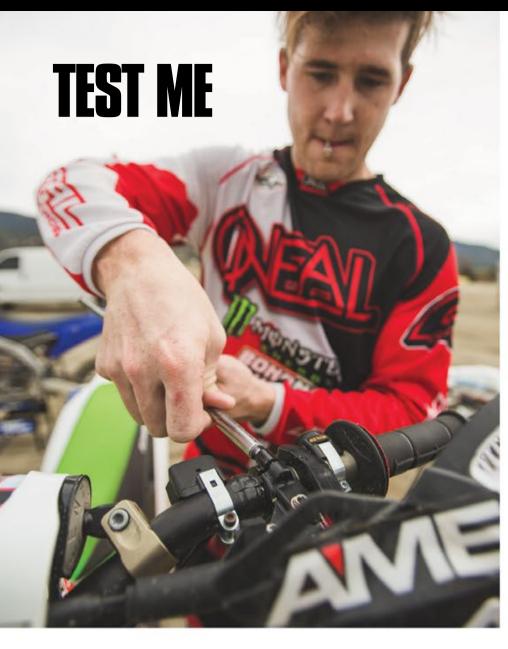








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#### **PULLING THE WOOL OVER THE EYES**

Being a test rider is being a trustworthy person. Integrity is what companies and manufacturers are looking for, and this trait can help you with dialing in your personal equipment. As a professional test rider you are not selling anything and only have your honest opinion to offer. There are not many other jobs in today's society where your opinion can be "factual" to a company.

How I got my career started was passing a test that I didn't even I know I was taking.

It was one of my first days testing for a manufacturer, and the engineers sent me on my way to evaluate a fork setting. I came back in and gave them my opinion on what it was doing out on the track. They sent me over to the box van to write my evaluation on that setting while they changed out forks. When they reinstalled the fork legs, I went back out and made a few laps and came back in and immediately wrote down my score on the "new" setting. As the engineers gathered around to hear what I had to say about "A" and "B"

settings I explained to them, "They both feel similar to me, and I didn't notice anything better or worse on the track." Before I could apologize and tell them I felt like a failure as a test rider, one engineer put his hand on my shoulder and said, "You're hired." The engineers put the exact same fork on (to test the tester) and had me take some laps on the track to see if I would just make up a different opinion on the same fork.

#### **CREATING A BETTER** MACHINE FOR YOURSELF

At the end of a test day you want to be able to load your bike up and go home knowing you made your machine a better fit for you. Most people can't test a product before buying it, so make sure to do your research before purchasing. All of us here at Dirt Rider take testing very seriously and want to give you as much feedback as possible so your dollars are well spent. Try these tips we have given you, and send us your own evaluation sheet and results of a test you have done at drmail@bonniercorp.com, and maybe we will run it in a future issue of Dirt Rider magazine.

#### **WANT MORE?**

NEED AN EVALUATION SHEET TO MAKE NOTES AND CREATE YOUR OWN TEST? WE HAVE ONE FOR YOU. FEEL FREE TO PRINT OFF A





## ITALIAN HARDWARE,

CODY WEBB'S FACTORY BETA 300 RR Story By Kris Keefer • Photos By Drew Ruiz









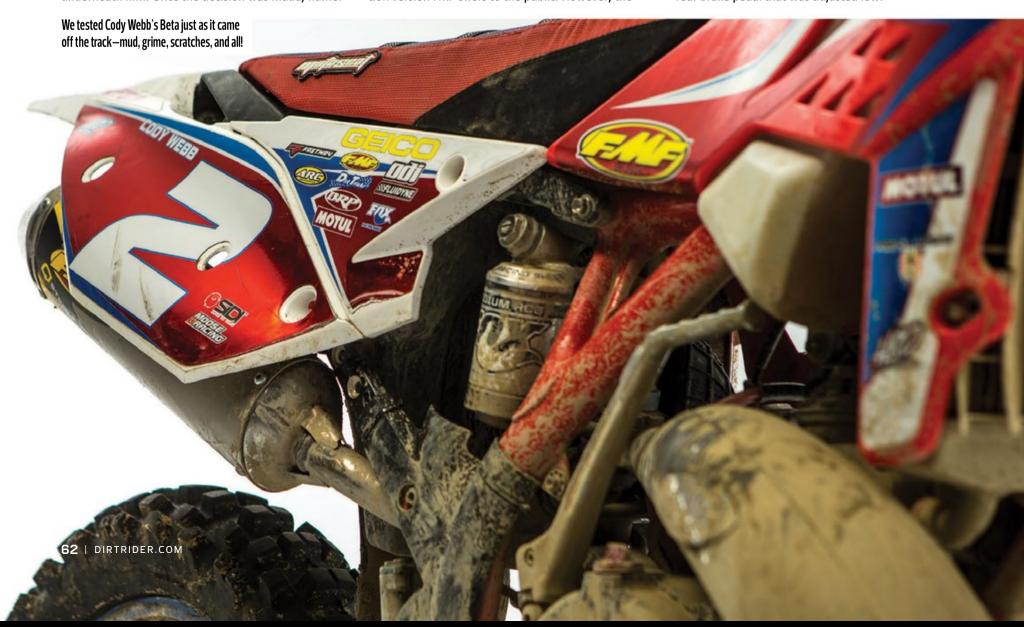
mmediately after the conclusion of the AMA GEICO EnduroCross series, we swept away American Beta/Stillwell Performance's 2014 Beta 300 RR that Cody Webb had just used to win the championship. Not long after loading the Beta into the Dirt Rider truck, we set out to see if the bike was as good as the rider.

Talking with Stillwell Performance's Alan Stillwell (American Beta's EnduroCross team manager last season) we found that many hours of testing were spent to decide on which bike Cody would race. It was either the Beta 350 RR thumper or the 300 RR pinger, and after many back-to-back comparisons Cody decided on the two-stroke simply because of the light feeling underneath him. Once the decision was made, numerous hours were put in to make the 300 RR smoker just right for the tall, lanky kid from Northern California.

Even after a win at the first round, Cody and Alan knew they needed more bottom-end to get out of the gate better against their competitors on 350cc and 450cc four-strokes. Stillwell Performance took the cylinder and had it blueprinted and polished and the power valve matched. They milled the cylinder head and reshaped the dome, as well as changed the port timing with different base gaskets until they found increased power that connected to the ground better on the EnduroCross courses' slippery terrain. They also played with a few pipe combinations that FMF gave the team but always came back to the production version FMF offers to the public. However, the

Powercore 2 silencer was slightly different; FMF built Beta a bigger diameter core, and it was also considerably shorter. The stock Sachs suspension was replaced with a Marzocchi fork and Fox Podium rear shock, and, finally, to drop weight, the battery and wiring harness were removed and most fasteners were replaced with titanium and aluminum pieces.

We got to spend a few days aboard the championshipwinning Beta 300 RR on some technical trails and a local EnduroCross track to give the bike the once-over. Swinging a leg over Webb's machine, we immediately noticed how neutral the cockpit was for a 5-foot-10 rider (especially being that Webb is 6-foot-3). The only hint of a tall rider cockpit was a high-set shifter and a rear brake pedal that was adjusted low.



## AMERICAN PILOT

First thing, we made our way to some technical, rocky terrain and were in awe of the tractability this Beta 300 RR provided. The motor chugged down low and was exciting yet manageable. The engine was free revving and hooked up to the ground similarly to a four-stroke. The bottom-end ran seamlessly through to the midrange where we discovered this bike loved to be ridden. The midrange rpm response was instantaneous, and we found ourselves hopping and jumping our way over rocks and logs that normally made us hesitant on other race machines. For a bike that is usually in the confines of small hockey arenas, there was still plenty of top-end to be had. Winding it out on the trails, the factory Beta 300 RR could pull third and fourth gears farther than we expected. Vibration was minimal for a two-stroke, and the jetting was crisp. Even though we mostly used first through third gears, the factory Beta transmission was left intact (unlike previous years' race engines) with all six gears still available.

The handling of the champ's bike is what impressed us the most. The Marzocchi fork felt like it ran a little high in the stroke in corners, but the Beta could hit obstacles at speed (and hard, we might add) and still have loads of comfort. The plushness of the fork over sharp objects left us with tons of confidence in tight, technical, rocky sections. The shock felt like it rode low in the stroke (even with sag adjusted for our testers' weight), but the more we rode the Beta, the more we could start to

understand why Cody likes it this way.

Webb transfers his weight and his large frame around on the bike so much that he purposely needs an unbalanced setup. The fork is stiffer than the Fox Podium 2 shock, and, coming from a trials background, this is a common theme. Having a low rear end really lets Webb get extremely far off the back of the bike for sections such as the Matrix (repeated log hits). The Fox shock has a slow, dead feel to it, but even with it riding low it never felt like it bottomed out. The light feel of the two-stroke chassis also makes it easy to maneuver to perform foot plants, and the ease of line changes makes this a fun, nimble-feeling motorcycle.

Another honorable mention would have to be how good the Dunlop "gummy" rear tire is for extreme off-road riding. It's like cheating! The gummy has so much grip and traction when it gets slick that you really have to force your brain to tell your throttle hand, "It's okay. Go ahead and twist it. The bike won't lose traction." Hopefully Dunlop will put these tires into production soon.

At the end of the day, this Beta 300 RR is made just for Cody Webb and his unbelievable skills on a motorcycle. It's not meant for the average rider. Or is it? What is special about this particular bike is that it pleased a wide range of riders, not just Cody. That is a testament to American Beta and Stillwell Performance for building such a well-rounded race machine that was able to beat the best racers that AMA EnduroCross racing had to offer.

# WANT MORE? FOULDW THE ENDUROCROSS SERIES ONLINE AT ENDUROCROSS SERIES ONLINE AT ENDUROCROSS SERIES ONLINE AT ENDUROCROSS AT EN

#### SECOND OPINION

#### CHRIS DENISON

HT: 5'10" WT: 155 LB. OFF-ROAD EXPERT

Just a few minutes aboard this Beta 300 RR are enough to reveal that the bike's previous owner is a serious trials rider; several components of the machine's setup are somewhat "trials like" in nature. The smooth, strong, four-stroke-like surge of low/midrange power is conducive to full traction and great acceleration. Similarly, the bike has the ability to rev up and splatter into obstacles with zero hesitation.

I also can't remember riding a bike that had better connectivity between the throttle and the rear tire. The suspension is oddly low in the rear, but the overall setup works well, particularly in river rocks and small, irregular boulders; here, the bike would stay straight as an arrow with almost no "dancing" out of the back end. Repeated hits to the fork (rough corner entry, specifically) would cause it to top out, yet bottoming resistance was incredible, and both ends of the bike felt balanced despite the chopper stance. The pegs/shifter setups have been opened up to accommodate Cody's massive feet, and the front brake and clutch are particularly sharp. Overall, it's obvious that Cody wants precision and consistency out of every aspect of this bike-from the motor to the controls to the suspension—because that's exactly what Beta and Stillwell delivered.

#### CODY WEBB'S BETA 300 RR PARTS LIST

- · ACERBIS FRONT ROTOR GUARD
- · BRP CHAIN GUIDE
- · D.I.D GOLD CHAIN
- · D.I.D RIMS
- · DIRT TRICKS ROTORS
- · DP BRAKES
- · DUNLOP FACTORY "GUMMY" REAR TIRE
- **DUNLOP MX 52 FRONT TIRE**
- · FASTWAY EVOLUTION PEGS
- · FASTWAY/STILLWELL PERFORMANCE LINKAGE GUARD
- · FMF PIPE AND SILENCER
- · FOX RACING PODIUM 2 SHOCK
- · HBD GRAPHICS
- · HYDE RACING SKID PLATE
- · MARZOCCHI FORK
- · MOTOSEAT COVER
- MOTUL FLUIDS
- · MYLER'S RADIATORS
- ODI BARS AND GRIPS
- · RAD HUBS
- · SUPERSPROX SPROCKETS
- · TIRE BALLS, FRONT AND REAR
- · TITANIUM AND ALUMINUM FASTENERS
- · VP 110 RACE FUEL



merica can be viewed as a great mixing pot, a blend, a mélange of the best of what the world has to offer. As such, Americans tend to want this collaboration out of the things they buy and invest in, such as, for example, dirt bikes. Yet it was an Austrian company that came up with this hybrid concept, this blend of trials and trail, this unique mix of different machines that we just had to ride.

The KTM Freeride 250 R is not laid out like a traditional dirt bike. Its frame is a mix of aluminum, steel, and plastic pieces, it only has one radiator (with a fan) tucked behind the frame's downtube, and the trials-shaped exhaust starts on the right side then crosses over to the left and under the panel. Next, at the push of a button, its seat flips up, hinging from the front of the bike to reveal an 1.8-gallon, translucent fuel tank and an air filter that, rather than an airbox, is enclosed in its own plastic compartment surrounded by the tank.

The 43mm fork is basically from a KTM 85 SX, and the shock is a PDS unit without linkage attached to a shorter and smaller swingarm than a standard off-road bike's swingarm. Powering the "little" bike is a 250cc two-stroke engine based on the XC-W model but with considerable changes to make it more trials-like. The power valve has been omitted, and the Freeride has a different cylinder and piston than its off-road bigger brother. To wedge it further from a trailbike, the transmission has shorter gear ratios with sixth gear being a much taller, transfer-like gear. And, of course, the exhaust is more reminiscent of something off of a trials motorcycle than a big bike. Looking at all of these specific features, many riders—some of us included—had

really high expectations of this bike, viewing it as perhaps the ultimate EnduroCross machine or extreme enduro racer. But at no fault of the bike's, our perceptions of the Freeride were built up so high that the reality of this KTM left us underwhelmed. The reasons this isn't the be-all-end-all dirt bike is basically that it is undersuspended and the motor is halfway between a trials bike and an off-road bike, and it doesn't really work that wonderfully for either. That being said, this bike does have its place, as we will explain.

Let's start with the motor. Flip on the choke (it's tucked away, so hidden you'll need a treasure map to find it) and stab the e-button and the bike fires pretty effortlessly. At an idle, you can hear and feel that the bike is different than a typical quarter-liter smoker. The exhaust note is pretty quiet but not trials-bike quiet, and it doesn't have a spark arrester. Clicking into gear, the Freeride lays down torque for days, but, in keeping with the trials-like feel, the gears are super short, and we had to upshift way sooner than on a normal off-roader. The motor makes almost all of its power down low, and once in the midrange it flattens out and makes more noise than power. That being said, this bike wasn't built to be a racer. A huge plus side to the luggability and short gears is that a rider, especially one who isn't particularly talented at technical/difficult terrain, can pick their way through tough sections without much worry of stalling or the need to carry a lot of momentum.

The chassis is smaller overall, making the cockpit a little cramped while seated, but while standing the ergos felt normal. This bike is very light-feeling compared to full-size off-road bikes and the low seat height, short wheelbase, and generous turn-









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#### THE KTM FREERIDE 250 R

ing stops make for a very nimble machine. On faster, more open trails, this KTM felt twitchy and undersprung, but in slower, first-/secondgear trails the Freeride's small stature inspires confidence and makes picking up the bike easy, especially for less muscular riders.

For fast-paced riding or racing, the fork is just not up to the task and can't take big hits like a full-size bike can. Neither can the shock, which, if you are sitting down and take a whoop at speed, will blow through the stroke and give you a buck. But at lower speeds and for just novice-level play riding, the suspension is more than capable and has a trials-y feel. The fork doesn't deflect when hitting rocks; rather it drives forward, up, and over like you'd want it to (we know from experience that this lack of deflection is at least partially due to the trials front tire). Combined with the sticky trials tires and super-torquey engine, the suspension gobbles up most obstacles with ease, as long as you are not slamming into them. We've found that the Freeride 250 R is much more about slow precision rather than race aggression or plowing through things. In really tricky rocks, roots, or when side-hilling where stopping on a normal bike would mean disaster, the Freeride could stop, pick a different line, grab a boatload of traction, and get going again. No problem.

After all of this, who is this bike for? Well, it's for everyone, really. No, it won't replace your 300 XC, your CRF450X, or your WR250R, but it makes for an epically fun second bike. Conversely, the Freeride would make an excellent "only" bike for those who prefer smaller, lighter, not-super-fast trailbikes. It is a good alternative to a CRF230F or TT-R230 for riders

seeking an easy-to-swing-a-leg-over bike, but in comparison the Freeride is much more capable without being intimidating. Lastly, it would be a great trail-building bike because of the manageability of the power and chassis, the minimal footprint on the trail, and of course the kickstand and electric start.

For those riders who are not looking to race yet want to get through gnarly terrain and be as free as the wind blows, this is the bike for you.

#### SECOND OPINION

#### **CHRIS DENISON**

HT: 5'10" WT: 155 LB. OFF-ROAD EXPERT

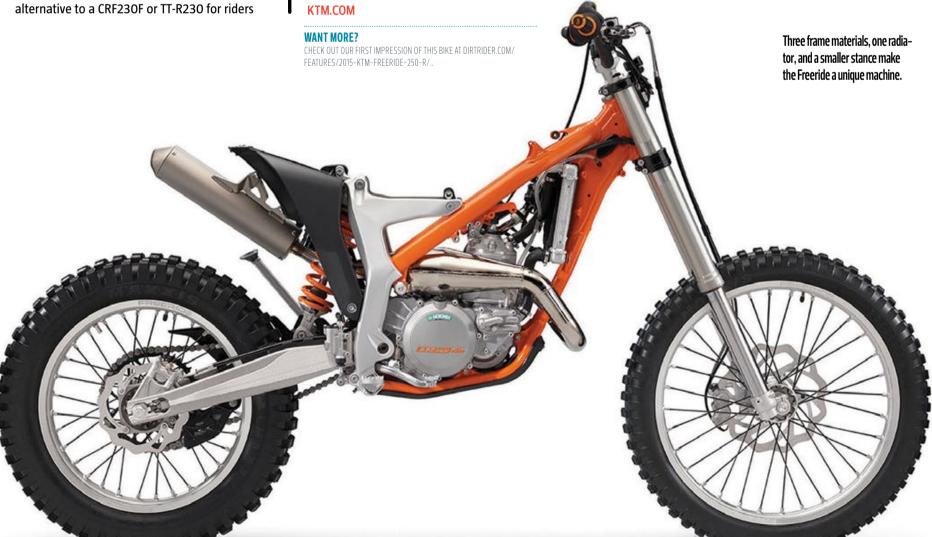
Having ridden the KTM Freeride 350 four-stroke over in Austria—and, more recently, having ridden the Freeride 250 back to back with a KTM 250 XC in EnduroCross—I've learned there are a lot of false expectations about these bikes. They are fun, maneuverable, torque-producing trail machines, but they are not hard enduro racers, and they are not the ultimate EnduroCross platforms. Think of the Freeride 250 as a hybrid trials bike with more off-road-style ergos and a KTM 85 fork because that's essentially what it is. I'll take a KTM big bike over the Freeride for serious trails and any form of racing, yet for a second machine, a trail-building bike, a non-serious play motorcycle, or an alternative to an entry-level four-stroke, the Freeride is a super-fun option.

#### KTM FREERIDE 250 R

| MSRP:               | \$7899    |
|---------------------|-----------|
| SEAT HEIGHT:        | 36.25 IN. |
| GROUND CLEARANCE:   | 13.6 IN.  |
| FUEL CAPACITY:      | 1.8 GAL.  |
| WEIGHT (TANK FULL): | 215 LB.   |









PRO CIRCUIT OFFICIAL DISTRIBUTORS





















#### With Justin Barcia

Story And Photos By Shan Moore

#### The Mellow Side Of Bam Bam

Justin Barcia earned the nickname "Wild Child" during his formative years in the 250 class in AMA Pro Motocross and Supercross competition. However, since moving to 450s full time in 2012, the New York native has been working hard to smooth out his style and polish his reputation. After years—both amateur and pro—on a Honda, Barcia signed a deal with AutoTrader.com/Toyota/JGR Yamaha during the off-season, something Justin says is just the next step in his bid to make it to the top.



#### How was the change from Team Honda to the Joe Gibbs team and Yamaha?

There were lots of changes, really. It was nice not to have to go to California during the off-season, for one. I went to North Carolina to do all the testing, and I enjoy being on the East Coast, so that was good. It was just a learning process, really. Besides learning a new bike, I was learning the new team, learning the people who work on the bike, and I also hired a new trainer, Johnny O'Mara.

#### How is it working with O'Mara?

Johnny's been a big change to my program for sure. It's been a lot more hard work. He's made me realize I haven't been doing enough in the past. It's been great though, and I think it's made me mentally tougher, too, because Johnny's a really strong-minded person. I push myself really hard to keep up with him, and even though I'm a young buck, he's pretty tough on the mountain bike, and it's a lot of work keeping up with him. I think looking at all the hard work I'm putting into it now makes me more confident.

#### Is the training mainly mountain biking, or do you work in the gym too?

It's mainly mountain biking, with some road riding and way more practice on my motorcycle. It makes me more comfortable on the bike and helps me know what it's going to do in different situations.

#### There's a rumor you snuck out of the Italian hospital after your crash at the Genova Supercross.

I was in the hospital for a few days, and on the night before my flight they said my chest was good and it was okay for me to fly, but then later that night another doctor came in and said she thought I had

a broken hip. I told her my hip wasn't broken because I had been walking, but she said they wanted to keep me and do X-rays. So I told her I wasn't doing any more X-rays, I was done with X-rays, and I was leaving, but they wouldn't let me leave.

So I ripped all the wires off of me and lights were going off and things were buzzing and beeping, and I ripped the IV out of my arm and ran out of the hospital, bleeding all over the place. They were chasing me down the street, but I didn't stop. They were not happy, but it was in my best interest to go home and see my personal doctor.

#### You had a reputation as kind of a "wild child" early on in your career. How has your style changed since you moved into the 450 class?

I've definitely smoothed out a little, maybe too much. I think I need to be a little more aggressive on the bike now. My style has definitely changed, and I think I'm a lot smoother now on the bike, but it wouldn't hurt for me to be more aggressive during the race.

#### Are you living in North Carolina now, near the team?

Nope, I'm still living in Florida, and it's just a short flight to get there. But the team comes down to Florida for most of the testing, which is good for me, but I was back and forth guite a bit.

#### Speaking of flights, you got your pilot's license a while back.

Yes, I have a student pilot's license, but I want to get my full license soon. I was really getting into it, but you really need to dedicate a lot of time to it because it's serious stuff, and I couldn't do that. So that's something I'll dedicate myself to when I retire from racing. I just enjoy flying. I have a buddy who is a pilot, and he flies me up to North Carolina when I need to go up there.

WANT MORE? SEE WHAT JUSTIN AND HIS TEAM ARE UP TO AT JGRMX.COM.



trials bike with a seat? Your eyes are not deceiving you—and neither is Beta. Dubbed the Evo 250 Sport, this hybrid was designed for low-speed trail riding, particularly of the "double black diamond" variety. I began testing it in the most civilized manner possible (beating the snot out of it at Enduro-Cross), and then took it to the trails, the desert, and even a round of the Southern California Trials Association series.

The seat proved to be a great addition for racing EnduroCross, as it allowed me to sit off the start, as well as in a few corners. The saddle will give your legs a rest and help you regain your composure when you get into trouble, but don't plan on spending too much time there. The reserve tank is also an awesome mod for long trail rides, as the low stock fuel capacity is a limiting factor of standard trials bikes. We had one small durability issue when the "Y" connector linking

the two tanks broke on a trail ride, but thanks to independent petcocks we were able to reroute and use the auxiliary tank as the main tank. With the added range, we felt much better about venturing away from the truck.

The power on the Evo is expectedly trials-like—torquey, responsive, and surprisingly quick in higher gears. Second through fourth were our most used gears, as we found that first would wind out quickly

## SIT DOWN,



#### 2015 BETA EVO 250 SPORT Story By Chris Denison · Photos By Drew Ruiz









and provided somewhat "lurchy" power in very slow terrain. Part of this is due to the knobbies, which perform moderately well if you lower the rpm and begin lugging, but they still slip (and deflect) more than trials tires, especially if you hammer the throttle. I ended up "borrowing" a trials rear wheel off of the Beta Evo 250 (they have the same size rear sprocket) for the EnduroCross main event. It was a big improvement over the knobby, especially in wet sections and when the front was coming to an abrupt stop. The knobby just feels different when splattering (a traditional trials move) onto rocks, as well as when trying to weight the rear end to get it to hook up. I'm not a huge fan of the left-side kickstarter, but I do appreciate the added hand guards and the fact that the shift lever is not unreachably long like on most trials bikes.

Don't expect big-bike suspension from the Evo 250 Sport; this is still a trials bike with the same suspension as the Evo. The fork, once through its stroke, will transmit any remaining force straight through the handlebar and into your wrists if

you start riding too hard. The shock has a springy feel that works well for popping over obstacles and planting the rear end precisely where you want it. Overall, handling is surprisingly stable considering how light the bike is, though it gets sketchier when you get higher than fourth gear. Again, you'll spend most of the time on the trail in the standing position, which—not surprisingly,

and aside from a little extra area to pinch with your knees feels just like a trials bike. In the end, the Beta Evo 250 Sport is among a handful of 2015 models that bridge the gap between trials machines and standard off-road motorcycles, and it's among my top picks for a bike to race in the TrialsCross class at EnduroCross—I'll be the guy sitting down and trying to catch his breath!

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- · BETA HAND GUARDS
- · ODOMETER MOUNTED ON HANDLEBAR
- · LARGER COUNTERSHAFT SPROCKET FOR CASUAL TRAIL RIDING
- · SPECIAL GRAPHICS

#### 2015 BETA EVO 250 SPORT

| MSRP:                  | \$809                                    | 99 |
|------------------------|--|----|
| <b>SEAT HEIGHT:</b>    | 31.0 I                                   | N. |
| <b>GROUND CLEARANC</b> | :E: 11.5 I                               | N. |
| FUEL CAPACITY:         | 2.0 GAL. TOTA<br>(1.3 AUXILIARY, 0.7 MAI |    |

**WEIGHT (BOTH TANKS FULL):** 175 LB.

**BETAUSA.COM** 







## A SHEEP IN 2015 SUZUKI DR200S WOLF'S CLOTHING

Story By Sean Klinger · Photos By Chris Denison

Sometimes the word "new" can really mean "revised," and that is what is going on with the 2015 Suzuki DR200S. Technically it is a brand "new," 2015 model, yet it is replacing the DR200SE that has been around for decades. The only real difference is cosmetic, but here at *Dirt Rider*, we are all-inclusive and when there is an opportunity to ride a bike—old, new, revised, or otherwise—we're on it!

The overall look of the Zook is "modern trail machine," but the parts gracing most of the bike say "retro playbike." Again, this is basically a DR200SE that went under the knife for some plastic surgery. The 199cc, air-cooled, OHC engine is nestled into a steel frame with a traditional (non-inverted) fork up front and a linkaged shock out back. To round out the low-tech package is the drum rear brake, the non-removable passenger pegs, and the analog speedo and odometer.

As for the performance, we are going to be blunt: There isn't much in the engine or suspension departments. To say the motor is cold blooded and conservatively tuned would be an understatement. In fact, we were so scared that we wouldn't be able to keep up with traffic that we didn't ride it on the freeway, even though it is highway legal. The fastest we got it to was 70 mph, with a tailwind and going slightly downhill. Although the power is way this side of mild, it builds smoothly and consistently, and the DR200S gets maximum traction in all situations.

We don't think anyone would notice if a coffee stirrer replaced the exhaust; it feels *that* constricted. On the plus side, it is so quiet that you could have a normal-volume conversation over the exhaust note at any rpm. The suspension falls in line with the mellow power; it is very soft and will complain about any real

off-road riding, but it is very comfortable at low speeds. It turns and handles like the heavy bike it is, but as long as you aren't trying to rail a rut, the low center of gravity helps the bike change direction without too much effort.

With all that being said, there are still some cool things about this Suzuki. The low seat height is great for shorter or newer riders, the soft power won't get newbies into trouble, the gas mileage is pretty amazing, and, as long as you stay in first gear, you can get through some rocky creek beds or up moderate hills. Cruising on the street, the ride is super smooth and vibration free. Plus, the mildly tuned powerplant will last forever. This is no high-performance machine, which means that maintenance is pretty much just oil changes and checking tire pressure.

The DR200S is part of a subgroup of bikes that are sort of like Jeeps, and like

Jeeps they can't go too fast over rough terrain, don't feel at home at highway speeds, and are not designed for recreation alone. But the DR-S is designed to get you places off the beaten track legally, safely, comfortably, economically, and with energy to spare. Don't count this bike out as an around-towner, campground steed, RV hitch carrier bike, or as a ride for your wife/new rider; they'd probably have way more fun on this than a 450cc racer.

#### 2015 SUZUKI DR200S

| MSRP:               | \$4499   |
|---------------------|----------|
| SEAT HEIGHT:        | 33.0 IN. |
| GROUND CLEARANCE:   | 10.0 IN. |
| FUEL CAPACITY:      | 3.3 GAL. |
| WEIGHT (TANK FULL): | 276 LB.  |

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# PRO CIRCUIT

# TI-6 PRO TITANIUM FULL SYSTEM FOR 2015 YAMAHA YZ450F \$1,064.95



Pro Circuit's latest top-tier exhaust offering is the Ti-6 Pro Titanium. We decided to try it on our 2015 Yamaha YZ450F (that has already seen a few other exhaust tests) to see how it compares to the stock pipe.

Weighing in at 7 pounds 11 ounces, the Pro Circuit Ti-6 is exactly 1 pound lighter than the stock YZ450F system. Bolting on the exhaust is easy and it takes less than 10 minutes to install. On the track, the Pro Circuit exhaust smooths out the abrupt throttle response that sometimes gets to be too much when riding longer motos on the Yamaha.

We received the Ti-6 system with a spark arrester insert (which comes in every muffler). Since we were riding the YZ450F only on the track, we removed the insert with spark arrester screen attached and found out that when we did, the YZ450F had a lazy (less exciting) feeling during roll on out of corners. The large, almost too big, muffler outlet gave it more top-end pull but killed the low-end, which was something we didn't like. To try something different, we cut the spark arrester screen out of the insert and reinstalled it into the muffler.

This gave the Yamaha some added life back into the bottom-end but not so much that we felt like it was uncontrollable out of corners (like the stock system). It is smoother than other aftermarket muffler systems we have tried, but the Ti-6 really makes the Yamaha easy to ride in really tight and/or hard-packed conditions. Midrange was lengthened over stock, and where the Pro Circuit

muffler provides more performance is in the upper mid to top-end. We almost wanted to go down a tooth to a 47-tooth rear sprocket with the stock muffler to let us use second gear more out of corners, but with the Pro Circuit muffler, second and third gears are more usable and pull further. On a completely non-performance side note, the color of the Pro Circuit titanium (once hot) is one of the most beautiful of any muffler out there.

The life of the system is superb and holds up well to tons of abuse. We put almost 20 hours on the Pro Circuit Ti-6 muffler system before we had to repack the can. Repacking is not that easy, due to the fact you have to drill the rivets out (versus having bolts to separate the can from the core) to take the can apart. At more than a thousand dollars for an exhaust

system, I would like to see easier access to the muffler packing. Overall, the Pro Circuit Ti-6 muffler system is a great bolt-on performance piece for your 2015 YZ450F, and the durability of the system is excellent. Just make sure you have the tools handy to achieve the ideal performance setup and to maintain the durability. —Kris Keefer

| RATED          | 84    |
|----------------|-------|
| INSTALLATION   | 18/20 |
| PERFORMANCE    | 45/50 |
| DURABILITY     | 8/10  |
| DESIGN         | 7/10  |
| PRICE          | 6/10  |
| PROCIRCUIT.COM |       |
| (951) 738-8050 |       |

# KTM

# **SKID PLATE WITH QUICK FASTENER** \$109.99



Why KTM off-road bikes don't come standard with skid plates is an enigma, especially since the Husqvarnas do. Unless you just like to destroy perfectly good things, don't go riding any dirt bike off-road without a skid plate. Murphy's Law says you will find something to smash the frame on. KTM Powerparts sells a lightweight injection-molded plastic skid plate for the 500 EXC (as well as other KTM models). It is an excellent option to cover those precious frame rails and engine cases. All the necessary hardware is included, and it mounts up initially in less than 15 minutes. Then, after the front bracket is in place, it only takes a few seconds to remove and reinstall the skid plate thanks to the quick fastener.

Protection is great and durability is decent, but if you really smash into rocks frequently, eventually the plastic gouges away and wears down. An added bonus is that plastic glides easier over logs and rocks when compared to aluminum. Plastic skid plates, especially this KTM Powerparts unit, don't affect handling like a hard-mounted aluminum skid plate can; it simply hooks over the back cradle crossmember. Dirt bike frames are designed to flex, so bolting a large, stiff aluminum skid plate across multiple points on the frame cradle can adversely affect the designed flex characteristics, often drastically changing the way a bike handles and usually not in a good way.

Many have a love/hate relationship with this plate's quick fastener. It is brilliant when you want to drop the skid plate quickly, but it will also decide to come loose and drop the skid plate at the worst moment when out on the trail. More than once I've ridden home with this skid plate strapped to my backpack when the fastener

came loose. One fix to help avoid the headache is to drill a hole next to the fastener and run a zip-tie through the hole as a backup (it is easy to remove without tools if needed). Another precaution is to run a zip-tie through the fastener loop in case it does come loose so you don't lose the fastener on the trail. The end-all fix is to use a threaded clip and a bolt, turning the skid plate into a one-bolt mounting system, eliminating the super-quick removal feature because, in the end, riding without a skid plate is just begging to smash up your bike. —Adam Booth

| RATED        | 88    |
|--------------|-------|
| INSTALLATION | 19/20 |
| PERFORMANCE  | 46/50 |
| DURABILITY   | 7/10  |
| DESIGN       | 8/10  |
| PRICE        | 8/10  |
| SHOP.KTM.COM |       |





# MSR

# XPLORER ASCENT GEAR \$69.95 JERSEY, \$159.95 PANT

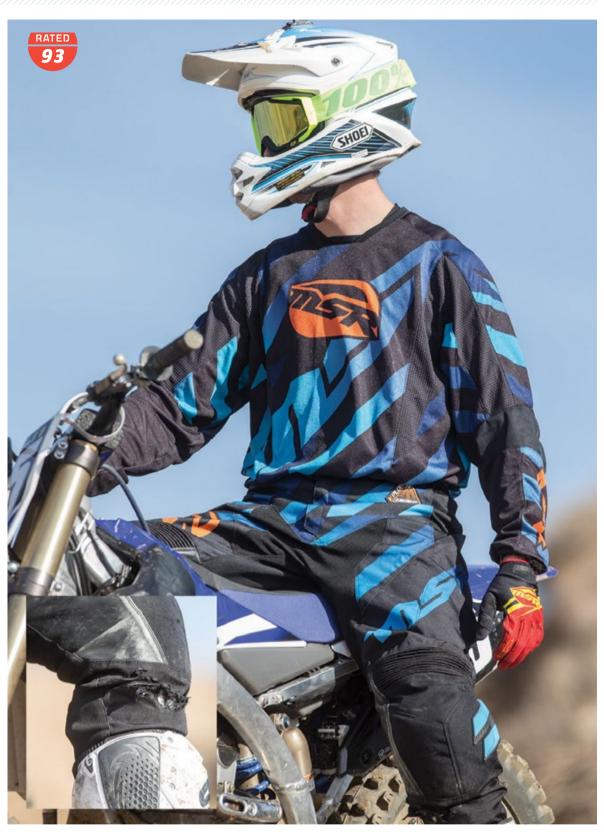
Staying strong to its off-road roots, MSR's Xplorer gear is the brand's premier apparel lineup for those who choose to venture beyond the MX track. Coming in two main styles—Summit, which is heavier duty and premium priced, and Ascent, a more lightweight, affordable option—both designs feature strategic venting and top seam stitching in the jerseys, with heat-resistant knee panels and zippered cargo pockets on the pants. I tested the Ascent gear over the course of several months and came away impressed both with how it held up and how it performed.

Starting with the Ascent jersey, sizing was spot on—perhaps on the billowy side in the body but perfect for riders like me who occasionally run chest protectors underneath. I'm a huge fan of the comfortable collar, as well as the lycra microcuffs, which are snug enough to keep debris out but stretch enough to be pushed up to just below the elbow, something that I commonly do when there aren't a lot of trees around purely because I like the feel. MSR's placement of the Hyper-flo mesh panels was also well thought out; cool air flies in on the front/slightly inside of the bicep, but the outer arm area—which most of us use for trimming branches during enduros—is of a tougher, non-vented material. Surprisingly, there are no tears on this jersey despite numerous trail rides in tight, sleeve-cutting sections. I'm impressed by the jersey's overall durability. If I could, I would make just one change: I'd add some sticky panels to the tail of the jersey that, although longer than the front, seemed to come untucked easily.

Performance-wise, the Ascent pant also has some cool features. The zippered pockets are deep and tough, being that they aren't just made of the inner mesh liner; I routinely kept a cell phone and GoPro wireless remote in them, both of which were easily accessed when needed. Fit is true to size, with plenty of room for braces and pads. MSR has wisely included exhaust vents on the back of the thighs that, in my opinion, aid movement as much as cooling. Along with the stretch panels,

these ensure that the pant never binds up, and I wore it on the motocross track many times with no complaints. One thing I'm not a fan of is the Velcro side adjusters on the waist; these are located precisely where I wear my tool pack, and the plastic digging into my hips was a minor nuisance.

The Ascent pant went through all the same paces as the jersey and came out looking slightly worse, mainly due to various exhaust headers. You can tell I wore this pant while trail riding a Yamaha WR250F because the left leg is burned (due to the wraparound header, something you don't see too often). A



series of solid melts was all it took to burn straight through the outer layer and the mesh liner. Aside from this, the only durability issue is some pilling on the butt (likely due to abrasion from a gripper seat) and early signs of fading from multiple washes.

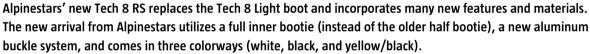
All things considered, I think MSR did a great job with this gear, and even after testing was completed I found myself reaching for the Ascent gear when packing for all-day trail rides. Again, I put a ton of time on this gear, and the fact that it has held up as well as it has (minus the pipe burns) proves it is worthy of the MSR logo. —Chris Denison

| RATED          | 93    |
|----------------|-------|
| STYLE          | 19/20 |
| COMFORT        | 9/10  |
| FUNCTION       | 48/50 |
| WASH/CARE      | 8/10  |
| PRICE          | 9/10  |
| MSRRACING.COM  |       |
| (951) 340-3301 |       |

# ALPINESTARS TECH 8 RS \$499.95







Once slipping into the Alpinestars Tech 8 RS boot I immediately noticed the sizing is spot on; I wear a 10.5 shoe and usually wear a size 11 motocross boot, and with the Tech 8 Lights I had to wear a size smaller (size 10). With the new buckle system you can leave your rubber mallet inside your toolbox because you can actually close the buckles with your hands (unlike the older-style buckle system). I would like to have a softer footbed, especially for longer days on the bike, because the standard material is a little hard on my heels when landing off larger jumps (I swapped them out with gel inserts). Break-in time is quicker than a Tech 10, as I could find my shifter and brake pedal within the first 30 to 40 minutes of riding time. The Tech 8 RS feels light (the Tech 8 RS weighs in at 4.6 pounds per boot), which made for less fatigue in my legs.

I am also a fan of the full bootie versus the half-bootie system, especially for ankle support. My ankles felt better protected while riding (with maintaining enough movement inside the boot), and they weren't as sore when the day was done. You will have to be conscious of the kickstarter protector on the right boot; I caught it on the footpeg while starting a bike, and it ended up pulling out the hardware that it screws into. Replacing it is as easy as buying a new one, but to me the protector is overkill.

The life of the Tech 8 RS is great. Both soles have lasted for more than 40 hours of abuse, and the firmness and newer feel of the boot while riding still feels intact. The buckles

and Velcro closures still work flawlessly, and the boot cleans up well without discoloring.

This might be one of my favorite Alpinestars boots to date. It feels a little lighter than the Tech 10, and once I slipped a more comfortable (more cushioned) footbed inside, it put a smile on my face. At \$499.95 I think this boot outperformed its price tag. If you're looking for a comfortable, bootie-type, off-road boot, the Alpinestars Tech 8 RS could be a part of your riding protection for a long time to come. —Kris Keefer

| RATING          | 90    |
|-----------------|-------|
| STYLE           | 18/20 |
| COMFORT         | 7/10  |
| FUNCTION        | 48/50 |
| WASH/CARE       | 9/10  |
| PRICE           | 8/10  |
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# THOR

# IMPACT RIG SE \$149.99





Riders are all over the map when it comes to the level of protective gear they choose to wear. Some just run a jersey while others suit up like they are planning to jump out of a moving truck. The Impact Rig SE is along the lines of the latter, and, being a rider who normally just wears a chest protector over my jersey, I wanted to see what this full-coverage system was all about. The Impact Rig has rigid chest, shoulder, elbow, and forearm protectors with an articulated, neck-to-tailbone back protector. There is also a kidney belt, and the whole thing is held together by a micro-mesh chassis

I wore an L/XL size (I wear an XL jersey), and the fit was great. I really like the adjustability of the positions of each plastic protector. There are tension straps between the elbow and shoulder pieces as well as between the shoulder, back, and front pieces. It takes just a few minutes to get these all adjusted to your body shape, and after the initial adjustment, they stay in place. I have sort of narrow shoulders, and I've tried on a different "full protector" that didn't have these straps and its shoulder pads were nearly on my biceps.

To get the rig on and off, there is one zipper on the left side of the chest, and the shoulder/chest tension strap has a quick-release connector. I've never liked to wear a kidney belt, and after trying this setup, I'm still not sold on them. The Impact Rig's kidney belt worked fine, and I could get a really good cinch on it, but I just never quite got comfortable with it. Also, the back protector is pretty long, and I had a hard time figuring out if I wanted to tuck it into my pants or not, since it was right at the top edge. When I did pull my pants over the kidney belt and back protector, eventually my pants would slide down and my shirt would come untucked.

Now, as a rider who runs hot most of the time, I'm always concerned about ventilation, especially when covered with this much material, yet I was very pleasantly surprised with how comfortable I was while wearing the Impact Rig. The chassis is super thin, and even the pads have vent holes; I never felt like I was any hotter than I'd have been if wearing a standard chest protector. What is also cool (pun intended) is that the back protector and the kidney belt are removable. This is how I ran the rig most of the time since I wasn't into the belt, and I wear a backpack when I ride off-road (the burly back protector plus a backpack was too much of a distraction). As for the shoulder and arm protectors, I really didn't notice them at all while riding. They form to my body well, stay in place, and don't affect the way I normally ride.

After months of use there are some scratches here and there (proof that it is doing its job), and the zippers

and straps are still looking and working great. There has also been a more metaphysical benefit to wearing this full protector that I think a lot of riders are overlooking by trying to "be cool" and not wear that much protection: The more protection I wear, the more comfortable I am taking on gnarlier terrain. Sure, I still might not make that hill, I might get flung into that tree, or I might fly over the bar into a pile of rocks, but I notice that I am much more willing to try those parts of the trail while wearing the Impact Rig. It doesn't make me a better rider, but it saves me some damage when my enthusiasm outweighs my skill. —Sean Klinger

| RATING         | 92    |
|----------------|-------|
| STYLE          | 18/20 |
| COMFORT        | 9/10  |
| FUNCTION       | 48/50 |
| WASH/CARE      | 9/10  |
| PRICE          | 8/10  |
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I liked the idea of having all the tools connected, but it was just an idea. The pieces that hold the sockets on the main piece of metal just slide off and the whole thing comes apart. The second mark against this set is that the sockets don't fit on the T-handle very solidly; they wiggle and aren't secure. They do, however, fit fine on my 1/4-inch drive wrench and other T-handles. The swivel is a nice touch, but I haven't had any need for it yet.

For the price, I would expect better craftsmanship and for the thing to hold together as intended. That being said, since the T-handle is short, it fits nicely into a backpack or tool bag. Plus, you can put the 8, 10, and 12mm sockets on the ends and leave the rest at home, since those are the most used sizes. —Sean Klinger



| RATED                 | 81    |
|-----------------------|-------|
| FUNCTION              | 40/50 |
| PORTABLE              | 9/10  |
| DURABILITY            | 19/20 |
| DESIGN                | 7/10  |
| PRICE                 | 6/10  |
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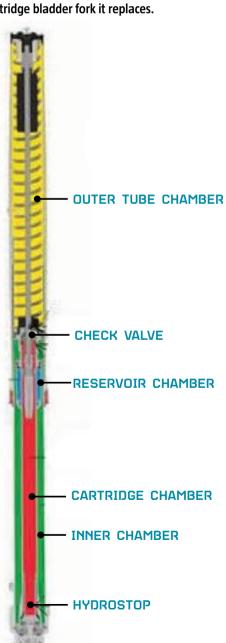


# WP 4CS FORK REBUILD

Story By Scot Gustafson · Photos By Adam Booth

Most coil-spring forks use either a closed- or opencartridge design. The closed-cartridge designs are regarded as higher-performing units because the damping components are contained in a sealed cartridge that prevents air and oil from mixing. Opencartridge forks are a more basic design that are easy to work on and offer lighter weight.

The 4CS (Four Chamber System) is WP's latest closedcartridge fork, and it utilizes design benefits of both closed and open cartridges to create a high-tech fork that is easy to work on. First introduced in 2013 on Husaberg motorcycles, the 4CS became OEM equipment on Husqvarna and many KTM models in 2014 and 2015. The fork features a compression adjuster on top of the left fork leg and rebound adjuster on top of the right fork leg to make it easy for the rider to tune without getting off the bike or needing tools. Despite the fact that one fork leg has a compression adjuster and one has a rebound adjuster, internal valving is the same in both fork legs. Fork springs can also be changed easily without completely disassembling the fork (like an open-cartridge system); and the 4CS is lighter than the closed-cartridge bladder fork it replaces.



### REBOUND ADJUSTER:

The red knob on the top of the right fork leg adjusts the rebound damping in the fork. Remember the three Rs: Right, Red, Rebound.

### FORK CAP:

Has a built-in Delrin bushing so the fork spring can spin freely and not get bound up under repeated loads.

# **COMPRESSION ADJUSTER:**

### (NOT SHOWN)

The white knob on top of the left fork leg adjusts the compression damping in the fork.

### MID VALVE:

Holds the fork's rebound valving shims and another set of compression valving shims to provide damping.

# CARTRIDGE SEAL HEAD O-RING:

Seals oil between the upper and lower chambers.

# FORK SEALS:

Special WP design made by SKF to provide low resistance and great durability.

# DAMPER ROD:

Has a built-in Pressure Relief Groove (PRG) to bleed off excess air or oil that builds up in the damping cartridge.

## HYDROSTOP:

The hydraulic bottoming cone for the fork. Depending on the model or year, uses valving shims or bleed holes to adjust the amount of bottoming resistance in the fork.

## BASE VALVE:

Contains the valving shims that provide compression damping.

# FORK LUG:

Changed from 35mm of offset in previous model forks to 33mm to put more weight on the front wheel for better front-wheel traction in corners.



# 902 HYDROSTOP NEEDLE:

Provides hydraulic bottoming resistance. The rebound needle is red, and the compression needle is silver.

# **BYPASS VALVE:**

Inside the Hydrostop
Needle is a small
removable valve (also a
needle) that points up
on the rebound side and
down on the compression side. These small
valves are controlled by
the external adjusters
on the fork caps; they
vary the oil bypass in
the mid valves. These
small valves are the only
difference between the
two fork legs.

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and transmission components. PRO PLUS+ is designed to extend clutch life and offers excellent feel.



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# DISASSEMBLY

The oil change procedure on the 4CS fork differs from other closed-cartridge forks because the damping cartridge is on the bottom and the spring is on the top.

Record your current compression and rebound settings then turn your adjusters to full soft to aid in the bleeding process later.

- 1. Remove the top cap of the fork using the special fork cap socket tool (KTM part #T14047 or Motion Pro part #08–0573). When removing the cap, hold the fork securely in a vise with aluminum jaws or in your bike's triple clamp.
- 2. With a thin 19mm open-end wrench, hold the cartridge rod locknut and loosen the top cap with the fork cap tool.
- 3. Remove the fork spring and adjuster rod from inside the damper rod. Drain the fork oil into a suitable container.
- 4. Support the fork lug in a vise and loosen the base valve with a 17mm hex tool. You can also install your front axle in the lug to use as leverage if you don't have a suitable vice.
- 5. Remove the base valve and drain the oil from the bottom of the fork into a suitable container.
- 6. Insert a cartridge bushing tool (KTM part #T14051) and push the cartridge out the top of the fork.
- 7. Remove the cartridge and drain any remaining oil out of the fork by letting it sit upside down.

Fork-seal removal and installation is the same as with other forks. Apply a reasonable amount of heat to the outer fork tube to help separate the upper and lower fork tubes without damaging the bushings.

Replace bushings if they show any signs of wear. Inspect the lower fork tubes for scratches and buff them with fine emery cloth (or carefully with a whetting/sharpening stone) to remove any sharp edges that could cause seal failure.

















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# DR. DIRT

# **ASSEMBLY**

8. Apply grease to the blue cartridge head O-ring, and install the cartridge into the top of the fork. Press the cartridge into the fork using the cartridge bushing tool. The blue O-ring will seal the cartridge into the fork tubes. Check the bottom of the fork to be sure the cartridge has been properly seated.

9. Mount the fork upside down in a vise. Slowly pour oil into the cartridge. Move the damper rod up and down to help bleed the cartridge. When the cartridge is full, oil will fill the inner tube chamber through the large holes at the end of the cartridge. Fill the fork until the oil is to the threads at the bottom of the fork. The lower portion of the fork takes just over 500cc to fill. Grease the threads on the base valve and tighten with a 17mm hex tool. Excess oil will overflow out of the fork when the base valve is installed. The base valve will be torqued to spec later, after the spring is installed in the fork to prevent the cartridge from spinning.

10. The top of the fork will use between 150 and 200cc of oil. Slowly fill the top of the fork with oil.

11. Bleed the fork by moving the damper rod up and down and side to side. When the fork is bled, the damper rod will move smoothly upward on its own

12. Measure/set the fork oil height from the top of the fork with the fork's tubes fully collapsed. With oil only in the inner fork tube the standard oil height will vary from 65 to 90mm (depending on the model; check your manual). There will be an approximately 30mm difference in the oil level if oil has bypassed into the space between the inner and outer fork tubes. You can remove oil from this space by fully extending the fork tubes a few times so it will bleed through the holes at the top of the lower fork tube.

13. Before installing the fork spring, measure the length of the fork spring with the preload spacers. This measurement is absolutely critical and should be checked and adjusted, especially if you are installing aftermarket springs. Spring preload can alter the ride height of the bike as much as 5mm for every 1mm deviation in spring length. The stock adjusted spring length is 480mm. Forks generally come from the factory with the preload spacers at the bottom of the spring, but they can be placed at either end.

14. Install the top cap and tighten with the fork cap tool and 19mm spanner to 18 N/m (13.3 foot–pounds) then tighten the fork cap to outer fork tube.

15. Torque the base valve to 40 N/m (29.5 pound–feet). Reset your compression and rebound clickers.















# SUPPORT SOURCES

WP RECOMMENDS THESE AUTHORIZED CENTERS FOR 4CS SUPPORT AND SPARE PARTS:

# RACE TECH

RACETECH.COM (951) 279-6655

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# **DIRT SURFING**WITH GEOFF AARON

Story And Photos By Ben Baucum

Although EnduroCross is known for its high concentration of formidable obstacles, there is one section that resembles every moto track and off-road path in the world: the humdrum stretch of dirt commonly called the "flat turn." It might be the least intimidating feature on the planet, but it is far from easy to execute at speed. Here, 10-time AMA Trials champion and EnduroCross main event winner Geoff Aaron explains the technique of a quick entry and exit of a 180-degree flat turn by utilizing massive amounts of body English and precise throttle control.

- "This EnduroCross corner was tough because it had a long, fast entry and no berm. In practice I noticed almost all the racers were pushing wide and not setting up well for the next corner, so I attempted something a little different."
- 1. "After the finish-line jump I accelerated hard, hugged the edge of the track, and braked as late as possible to set up for the apex of this flat turn. Under braking I pitched the bike right but almost immediately got back on the throttle in order to steer with the rear wheel."
- 2. "Under acceleration I tried to keep as much weight as possible on the rear wheel by standing on the outside footpeg. Traction is key to moving forward, holding your line, and keeping from pushing wide."
- 3. "Since the following corner was a righthander I tried to hug the inside as much as possible in order to set up for it. I wanted to exit this corner as far left as possible. Thinking and looking ahead helps you maintain speed and flow."
- 4. "Normally I wouldn't suggest letting your leg ever drag behind you, but in this case my foot would've clipped the tire, so I opted to sit down, accelerate hard, and give my leg some room to clear the inside marker."

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"Under acceleration I tried to keep as much weight as possible on the rear wheel by standing on the outside footpeg."



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# PRO SECRET WRENCHING

# REAR BRAKE TIPS WITH RCH SUZUKI'S KELLY LUMGAIR

Story And Photos By Pete Peterson

RCH/Soaring Eagle/Jimmy John's/ Factory Suzuki racer Ken Roczen likes to run his brake pedal high, and when we asked factory mechanic Kelly Lumgair about it, he gave us some setup tips on the entire rear brake system, which operates a little differently than the front brake system.

# 1. BRAKE HEIGHT SETTING

Roczen likes his rear brake very high. For many riders this would be a bad setting since it can lead to rear brake dragging. Kelly says this is not a problem with Roczen. He removed the rear brake stop completely.

### 2. BRAKE CLEAT

Even with the stop removed, the team still runs a taller brake cleat to get the desired height.

### **FLUID HEIGHT**

"Make sure you don't run too much brake fluid because as the brakes get hot it's going to rise and it's going to cause pressure on the pads. Some manufacturers will have a max fill line. Just make sure you don't go past that. Always have the rubber bladder in there. Some of them are directional; you've got to pay attention to that."

# 3. MASTER CYLINDER INSTALL

"When I put the brake system on, before I tighten the master cylinder bolts I'll put pressure on the brake pedal because this will locate itself in line with the pushrod so everything's all in one line."

# 4. WIGGLE, BUT NO FREE PLAY

"We don't really have free play on the rear brake. You want to make sure, though, that the clevis has movement; then you know you're not putting pressure on the pistons." Kelly says a simple test is to make sure your clevis has wiggle when there is no pressure on the brake pedal then zero movement when the brake is applied.

## BLEED

Even though Ken is light on the brakes, Kelly bleeds them for every race, "because fluid attracts moisture and the more moisture it gets, that's going to lower the boiling temp. I'll flush the system, new fluid through every week, and then I'll always back bleed because you want to get everything out of the master cylinder.

# TRACKSIDE BACK BLEED

For a quick fix, Kelly will sometimes press in on the rear calipers to "back bleed" the system. This can get some air out but not all. "More often than not that will help a little bit. The back bleed will mainly get the air out of the master cylinder because air is not really going to travel all the way [through the line]."







# **NO FOAM**

"In supercross, depending on the track, I don't think it's always necessary, but you don't want to get a rock in your brake pedal. So we'll see during track walk. If it looks a bit dangerous for that, we'll stick some foam in there."

# **5. BRAKE SNAKE**

Ken's high pedal position helps keep it out of harm's way, but the team still runs a brake snake to prevent it getting bent or pulled out.

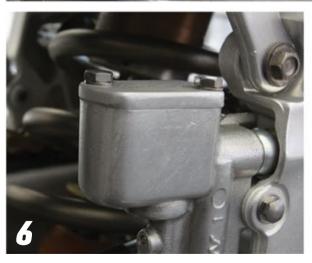
# **6. FACTORY TOUCHES**

Kelly puts washers on these titanium bolts so they don't eat into the aluminum master cylinder cap. Suzuki welds over the sight glass to prevent any possibility of a broken or knocked-out window. Kelly removes the rotor protector to save weight. The aluminum clevis is a factory Suzuki part. Kelly runs a hose over the brake snake to prevent wear on the magnesium case cover (the team rotates between three motors for the season).









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# TRAIL TIPS

# **POST-RIDE PRIORITIES**

Story By Chris Denison  $\cdot$  Photo By Shan Moore



When completing a multiday ride or race, the United States Cavalry's timeless standing order of "horse, saddle, rider" is an excellent method of prioritization. The premise is simple: When finishing a ride, the first thing you take care of is your steed, then your gear, and finally yourself. While this mantra might sound counterintuitive, there is actually a great deal of logic behind it.

As soon as you get off the bike at the end of a day, your first priority should be to get the machine ready to rip for the following morning. That could entail washing it and completing a full race prep or just checking the oil and filter, tightening the spokes, and fixing any crash damage that occurred. It's okay to be eating a little snack and replacing electrolytes as you work, but your main focus should be to get the bike ready for the next time you ride it.

Once the motorcycle is 100 percent good to go—we're talking tank full, fork bled, just startit-and-go ready—you can turn your attention to your gear. This covers everything from prepping your goggle for the next day's race to airing out your kneepads so they aren't growing mushrooms when you go to retrieve them for the next ride.

This is also the time to sweep out the van, drain the cooler, top off your fuel cans, clean out your hydration pack, and stow your gear bag. Finally, once your bike and your support equipment are all dialed, focus on yourself—a hot shower, a big meal, a bit of light stretching, and some muchneeded sleep. Serious racers will go so far as to lay out their base layer of clothing and prepare something for the next day's breakfast—even if it's just a protein shake and a banana—so that they can get rolling faster the next morning.

The reason you do things in this order is because you are at your sharpest and most effective when you first get off the bike, and this is the best time to get your machine set for the next ride. If you shower and eat a big meal as soon as you're done riding, you'll forget some of the key things you wanted to check or change while you were still riding, and you'll be so tired at this point that you'll do a half-hearted job at the things you do remember. Even if you're just riding for one day, remember to take care of things in order of "horse, saddle, rider" and you will be rewarded with a happier bike, better life out of your gear/equipment, and an even cleaner garage.















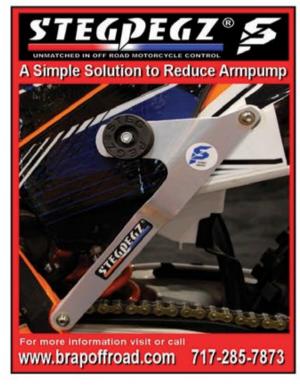
































# LONG HAUL UPDATE 2015 HONDA CRE25OR

Story By Scot Gustafson · Photos By Scot Gustafson And Ken Symer

Honda's CRF25OR has been a favorite bike of ours since it was introduced in 2004. Despite this year's bike lacking mountains of horsepower, the little Honda still makes its way around the track plenty quickly. As the easiest bike to work on, the CRF25OR has the most hop-up potential of any bike in the class, and parts resources are plentiful.

Our agenda was to get reliable horsepower out of the bike and do our best to figure out the Triple Air Chamber Separate Function Fork. Although the stock dual exhaust does a good job of keeping the noise level down, it is not our top pick for the dyno. We installed a Yoshimura exhaust to wake the bike up and improve throttle response. During the first 25 hours of use, our testers burned through two clutches. Rather than install another stock clutch, we had Rekluse meet us at the track and install a manual Torque Drive clutch like the one used by Honda's MX GP team. We tested heavier clutch springs but felt the stock units put more than enough power to the ground with the 24-plate clutch. A Works Connection clutch perch finished off the package, so we had a lighter, more positive clutch pull.

To maintain reliability, the only internal engine mod we made was a Cylinder Works big-bore kit. The 270cc piston still revs like a 250 but gives us that little bit of extra power we wanted to challenge any bike on the track, including 450s. The most common comment we heard about the engine package was, "That's the strongest 250 I have ever ridden." Because we had more power, we ran larger rear tires (110/90 and 120/80) to get better traction and longer wear than the stock 100/90-19 size.

The new Showa air fork is good but not great. Like most air forks, the TAC works excellently on big bumps but lacks front-wheel feel and traction on small bumps. The best setup for the fork was to use 174 psi in the inner air chamber on deep loam and 167 psi on hardpack. We kept the balance chamber pressure 5 psi below the inner air chamber pressure to maintain ride height and get some degree of plushness. After a lot of testing with clicker settings, we determined that softening the compression was the best way to maintain front-end traction. Speeding up the rebound gave us a plusher ride, but we lost front-end control and went back to settings closer to stock. We tried a number of fork pumps on the bike and found that the long air chuck on the OEM Kawasaki pump worked the best on the hard-to-reach internal balance chamber fitting.

White Cycra plastic and Motografix custom graphics gave the bike a much-needed face-lift after a lot of hard riding hours. The Guts Racing seat cover made us realize the stock cover has very little grip. We like the Honda CRF250R because it is fun to ride. The lightweight machine had typical Honda reliability and never let us down. The air fork is nothing to be afraid of, and forgetting your fork pump at home is like forgetting your socks; it's not ideal but you can still ride.

PRIMARY USE: MOTOCROSS TRACKS FOR PRACTICE AND RACING MAIN MODS: YOSHIMURA RS-9 EXHAUST, CYLINDER WORKS 270CC BIG BORE CYLINDER KIT, WORKS CONNECTION CLUTCH PERCH, REKLUSE TORQUE DRIVE CLUTCH, CYCRA POWERFLOW BODY KIT, CYCRA FULL ARMOR SKID PLATE, MOTOGRAFIX FULL CUSTOM GRAPHICS KIT, GUTS RACING HARDCORE GRIPPER SEAT COVER, RENTHAL R1 CHAIN AND ULTRALIGHT SPROCKETS, DUNLOP MX32 TIRES IN 120/80 AND 110/90 SIZES, VP T4 RACE FUEL

MOMENTS OF GLORY: FULL THROTTLE ON A BIG-BORE ENGINE FORGETTABLE EXPERIENCE: FORGETTING THE FORK PUMP AT HOME

TOTAL HOURS: 52

AFTERMATH: TWO STOCK CLUTCH KITS, FRONT AND REAR BRAKE PADS, ONE SET OF STOCK SPROCKETS, ONE SET OF STOCK GRIPS, ONE D.I.D MX GOLD CHAIN, ONE FORK SEAL, FIVE SETS OF DUNLOP GEOMAX TIRES



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TO THE RACE WEAR







